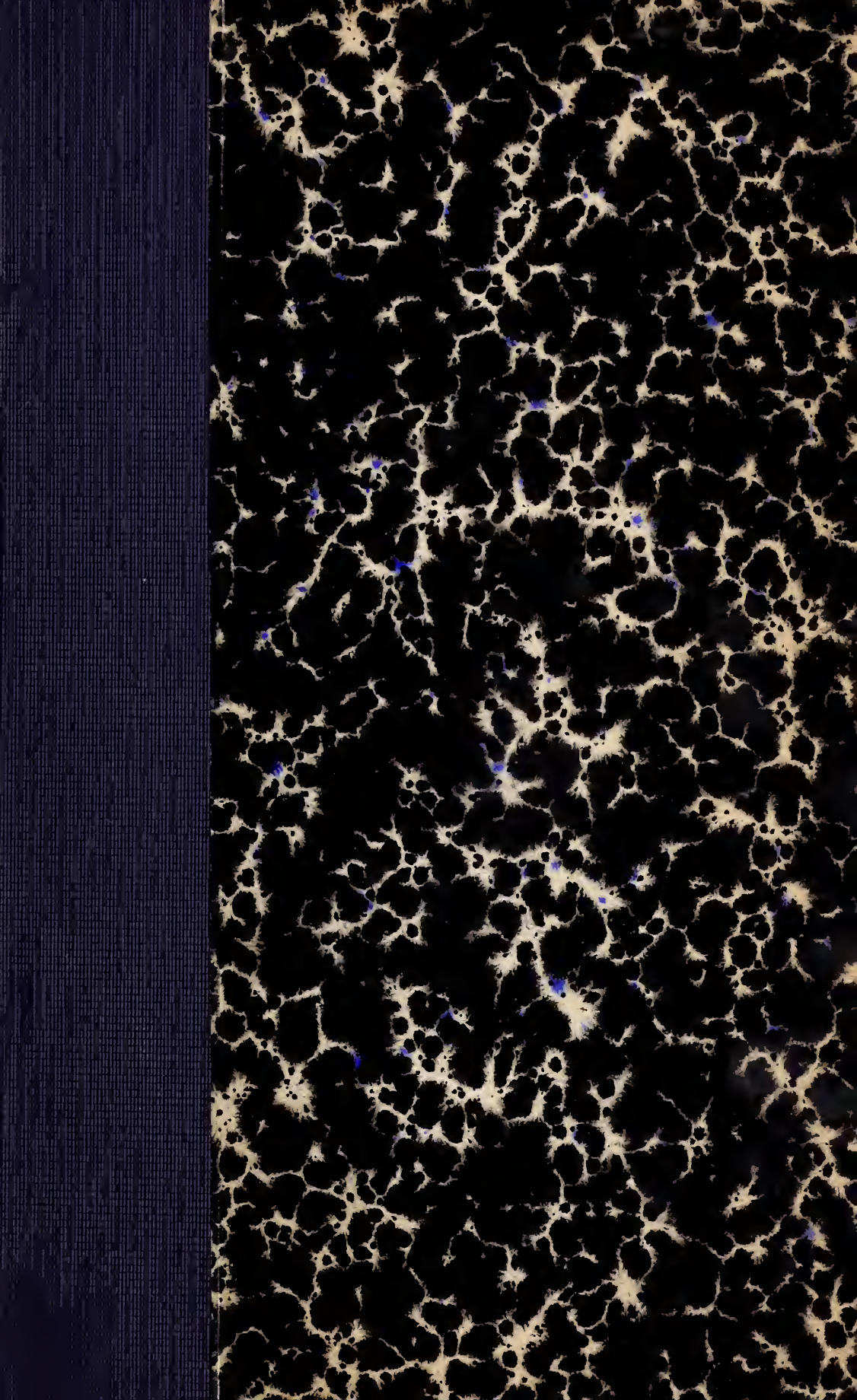

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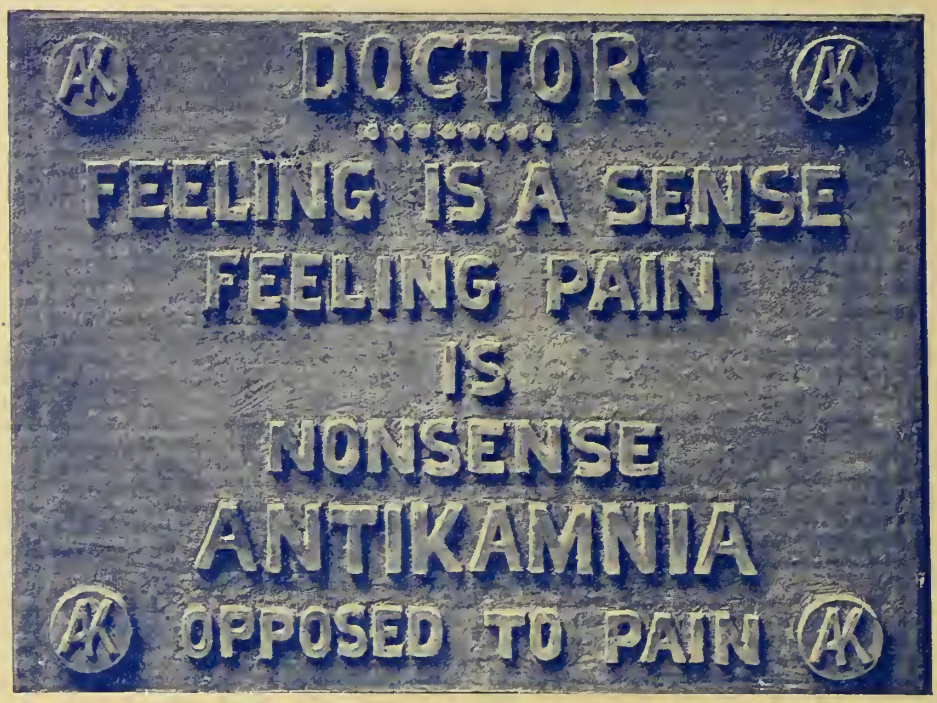

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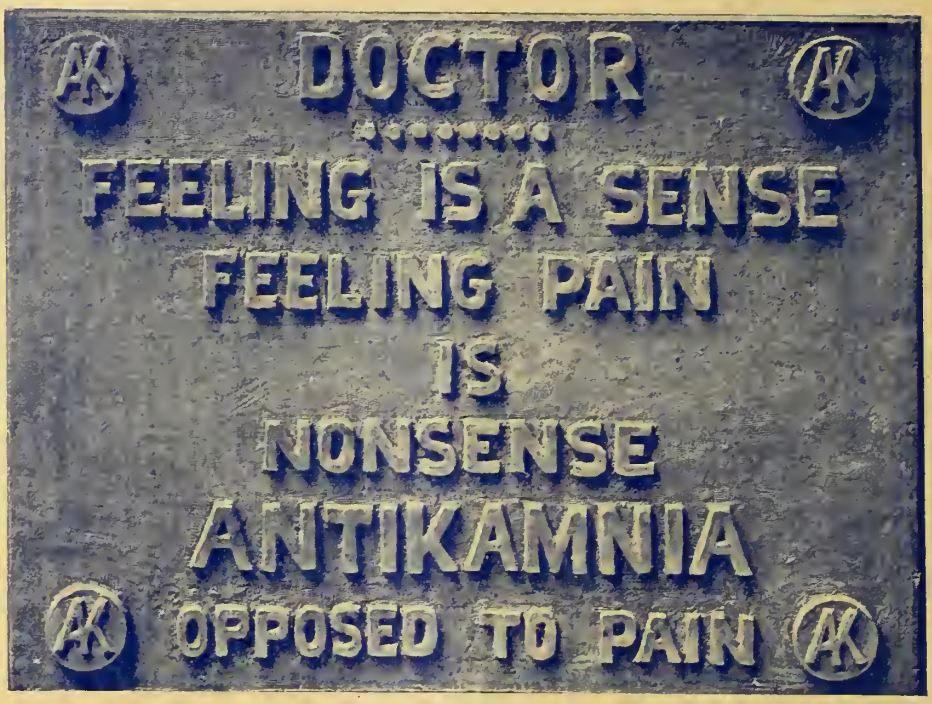

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Original Articles.

A SATISFACTORY TREATMENT FOR THE COMMONER FORMS OF PRURITUS VULVAE.

By SAMUEL WYLLIS BANDLER, M.D.,
Adjunct Gynecologist to the Beth Israel Hospital, New York City.

Pruritus vulvae is generally viewed as an affection of the external genitalia, characterized by the sensation of itching, burning or biting. It has been commonly divided and classified into the nervous, constitutional and local forms. Leaving out of consideration the cases occurring in connection with diabetes, the rare form known as kraurosis vulvae, and the instances considered to be neuroses, the vast majority are due to local causes which are commonly overlooked. Pruritus vulvae is only a symptom of a diseased state, even though this connection cannot always be distinctly demonstrated at first glance.

In reviewing any series of cases it will be found that often vulvar lesions are present and often not. There may be a diffuse reddening of the external genitalia or minute excoriations or furuncles, etc. The smaller labia may evidence a hypersecretion of the sebaceous follicles, or there may be a minute granular roughening of smaller or larger lesions, resembling pemphigus. The vagina on close examination may show a diffuse reddening or it may be covered with multiple small red granules. Other cases show isolated areas of a dark red or blue character with a dilatation of fine venous channels. The local affection on the external genitalia evident to the eye is due either to the etiological factors or to irritation and is therefore a secondary condition. It is necessary to differentiate (1) the cause, (2) the local microscopic changes, if any, due to the causal factor, and (3) the changes brought about by scratching or irritating treatment. In many cases no external or internal lesions are evident, the only symptom being a profuse vaginal discharge. Not rarely these internal and external evidences of a local change first show themselves during the course of treatment, while in other cases they probably have been present, and, having run their course, only the discharge remains. The cause to which attention should be given in the general run of cases is to be found in one of three sources, (1) the bladder, (2) the vagina, (cervix or uterus) and (3) the rectum.

The cases in which the rectum is mentioned as a causal influence, are noted simply from the standpoint of etiology, for it is quite certain, that after constipation, especially on the use of enemata, or after diarrhea, the means of infecting certain areas of the genital tract are present. This is often the case in patients with lacerated perinea, and in those careless as to personal cleanliness. This factor plays a part in infecting the bladder and especially the vagina, for a bacterial infection is the basis of the causes leading to pruritus vulvae, and most of the cases suffer in addition from irritable bladder or leucorrhea or both.

In reviewing the history of numerous causes, especially, but not always the milder forms of pruritus vulvae, it is noted that patients mention a frequency of urination by day and by night. (Close examination discloses the fact that frequently this condition and the vaginal discharge

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were noted at the same time.) This concomitant condition known as irritable bladder, must be distinguished clinically from the severer or later forms known as cystitis. Now, that we consider irritable bladder likewise due to a local pathological condition, we must credit the urine and its contained bacteria with the power to produce external local irritations. (That certain forms of profound cystitis cause a most decided vulvitis is no novel statement.) The connection between disturbances of a milder character and the milder forms of pruritus, is proven by the result of treatment, and this form furnishes us with the most grateful percentage of cures.

The treatment is as follows: The bladder is thoroughly irrigated with a strong solution of boracic acid preferably through a glass catheter. I prefer the use of a special catheter with a funnel shaped outer end of roughened glass into which fits hermetically a glass bulb connected with the rubber tube of the irrigator. An irrigator and a thick rubber tube of a diameter to just cover closely the glass catheter furnish a fair substitute. After irrigation with boracic acid solution, four ounces of a 1 per cent. solution of silver nitrate are introduced and left in the bladder for two or three minutes. The bladder is then emptied and irrigated, and four ounces of a 2 to 10 per cent. watery solution of ichthyol are introduced, which the patient is to retain for one-half hour if possible. This treatment is continued every other day. For internal medication I prefer seven grains of urotropine, four times daily in the severer cases, and one dram of a mistura cystitis four times daily in the milder forms. The effect of this treatment on the coexisting pruritus is often immediate.

The most frequent form of pruritus vulvae is that due to a leucorrhea. The vagina of the newly born is sterile for only two to three hours, after which period bacteria are present. The numerous forms of bacteria present in many vaginal secretions are evident to any one who takes the trouble to examine a specimen under the microscope. The bacteria present in the normal vaginal secretion are those described by Dörderlein, and they are responsible for the acid reaction of the normal vaginal secretion. In addition there are found in numerous cases various forms of streptococci and staphylococci, bacterium coli, yeasts, bacilli, etc. (The discussion of gonorrhea is not considered in this paper.) Every case of pruritus vulvae associated with leucorrhea in the non-pregnant woman evidences a varied number of bacteria, which will not be classified in this paper. In examining the secretion we find three major forms, (1) consisting mainly of leucocytes, (2) a form containing mainly vaginal epithelia and (3) a form composed of both these elements. As the normal vaginal secretion consists of epithelia alone it would be strange to consider the second form, even though profuse, pathological, were it not for the presence of numerous bacteria. They may be found in such large numbers that they give the picture of pure culture. They may be found between the epithelial cells or in them, and it is for this reason that a microscopic examination is necessary to determine the form of treatment. The larger the number of epithelial cells and the more decided the invasion of the cells by the various forms of bacteria the deeper in the vaginal mucosa has the involvment extended; and the greater the number of leucocytes the greater is the reaction. Considering this condition to be a bacterial invasion we may readily understand the value, for instance, of the following treatment.

The acuter forms are commonly treated by sedatives such as ichthyol, but the following is a fair routine treatment for the average case. A Ferguson speculum should be used, for it is the only means of furnishing us with a distinct view of the entire length of the vaginal canal. The vagina is washed thoroughly with cotton sponges soaked in a 1 per cent. solution of lysol and is dried with absorbent cotton

tampons. Into the speculum is poured one ounce of a 1 per cent. solution of bichloride of mercury rendered acid by the addition of a few drops of hydrochloric acid. By moving the speculum forward slowly the entire vaginal canal is bathed for one minute, and then dried by cotton. A long tampon is then introduced, made and prepared as follows: Non-absorbent cotton is rolled to a thickness approaching the diameter of the speculum and 4 to 5 inches in length. This is covered with a double layer of sterilized gauze and fastened at either end by a string tied about it, one of the strings being left long for the purpose of removing the tampon. The gauze is powdered thoroughly on all sides with a powder composed of one part alum and five parts of boracic acid, the proportion of alum being increased when a more decided desiccation and desquamation of the vaginal lining are desired. This tampon is introduced through the speculum and kept in place for 24 hours, and if possible for 48. In this manner the application is made equally to all parts of the vagina and the secretion is so absorbed that on removal of the tampon the vagina is found to be perfectly dry. In the forms evidencing acuter inflammation the same tampon well covered with a 10 per cent. solution of ichthyol in glycerine is to be used as a preliminary treatment as often as necessary. If the tampon is only retained 24 hours a douche of one tablespoonfull of a 20 per cent. solution of formalin to the quart of water twice a day, is given. In my experience the best results are gained without douches of any sort. Draining the vagina and keeping it dry is of decided value. It is often astonishing how rapidly a pruritus and a leucorrhea disappear after this treatment.

Among the other causes of leucorrhea, but itself probably due to bacterial influence, is erosion of the cervix, and it is astonishing what an amount of secretion can be furnished by an erosion in 24 hours. For this the ideal treatment is the application of a solution of equal parts of carbolic acid and iodine painted over the eroded area. This is followed by the introduction of the tampon before mentioned, soaked in 10 per cent. ichthyol in glycerine.

Personally, I lay little stress on the so-called uterine form of leucorrhea, and only consider its existence when demonstrated beyond doubt. These cases are readily overcome by the use of atmokausis. Not intending to discuss in its entirety the questions of pruritus vulvae and leucorrhea, it has been my purpose to discuss the treatment of these frequent cases, which are partly dependent on disturbances in the character of the urine and partly due to the irritation of the chemical and bacterial constituents of a leucorrhea secretion. Stress is simply laid on the fact that the etiological factor and not the secondary factors demand our main attention. For this reason the results of the treatment mentioned above can be readily appreciated.

127 E. 61st. St., New York City.

TRACHOMA AND ITS TREATMENT.

By Wm. Cowen, M.D., New York City.

Of all forms of lid disease trachoma is perhaps the most interesting because of the prevalence of the trouble and the dangers to the eye-ball. The great bulk of lid diseases is made up statistically of catarrhal inflammations, and of granular lids, and among the poorly-housed working classes trachoma is wide-spread.

The worst forms of trachoma have been brought to this country by the hordes of immigrants from Russia and Italy; from this class of citizens has the disease spread through the work-shops and public schools of the city.

The hearding together of these people in crowded tenements offers an insurmountable obstacle to the stamping out of the infection. The nature and treatment of trachoma becomes thus a grave question from the social point of view.

The laudable attempt of the Board of Health, in trying to eradicate trachoma

from the public schools by daily inspections, has demonstrated to what a large extent school children are the victims, and how the disease may run its course without causing any marked symptoms.

While the curability of trachoma is universally admitted, it must also be admitted that the mucus membrane of a lid once the seat of a trachomatous infection is always susceptible to catarrhal changes.

Here, as in other diseases, prevention of the disease is the object in view.

The varieties of trachoma can be generally classified as acute or follicular, and as a diffusely infiltrated form in which no follicles can be seen; there is also a variety of trachoma in which the tendency to atrophy of the mucus membrane is so great that it becomes converted into a thin cicatricial tissue, devoid of glands; it is in this form of trachoma, that we find deformities of the tarsal cartilage, resulting in the eyelashes sweeping over the corneal surface producing corneal abrasions, ulcerations and pannus.

This clinical picture is found in advanced stages of trachoma and must represent a natural termination of the disease. We find it especially among the immigrant class, who have had no opportunities for eye treatment in their native places.

These patients do not really suffer from trachoma, but from its corneal complications. The sight is damaged to a greater or less degree, and patients in this condition are severely handicapped in their life struggle. The diagnosis of trachoma presents no difficulty, its treatment presents a great deal.

In the acute or follicular form the surgical methods have great sway at present, the method consisting in the mechanical crushing of the follicles which carry the contagion; in the diffusely infiltrated form of trachoma where the mucus membrane has become converted into a thick velvety membrane the scarification method has been used. The disadvantages of both methods consist in the damage done to the mucous membrane of the lids, and while an immediate improvement is noticeable, I believe the final cicatrizations leave the lid in worse shape than if no surgical treatment had been employed.

The non-surgical treatment consists in the application of the copper stick, bichloride of mercury solutions, alum stick, and solutions of iodine in benzol.

The copper stick has always been a very effective method of treatment, but it is so very painful that patients dread it, and as many of the patients are children, a less painful method of treatment must be employed. During the last year I have treated a large number of trachoma cases of all varieties, and in all stages with the glycerite of tannin in officinal strength, and it appears to me that it accomplishes more than any other drug.

In the first place, the applications are not painful; five or ten minutes after an application patients use their eyes without any dificulty.

The relative painlessness of the treatment is important, because young subjects will simply refuse to submit to a painful treatment, often to be repeated, as it must be in granular lids.

In the diffusely infiltrated form, and in the dry cicatricial variety the glycerite of tannin is equally serviceable; in this dry variety of the disease the treatment is particularly grateful, because the dry membrane is covered with the oily solution produced by the glycerine. The method of applying the solution is to soak a cotton swab with it, and rub it in very briskly into the membrane.

Applications should be made as frequently as possible, once a day if feasable.

As with the other methods, so here the treatment must last a considerable time.

The presence of corneal complications of trachoma in abrasions, ulcerations, and pannus of the cornea are no contraindication to the employment of the glycerite of tannin. The use of this preparation for the purpose indicated above is as yet not widely enough known, and I can recommend its employment.

WHAT IS IRRITABLE BLADDER, AND WHAT IS THE BEST METHOD OF TREATING IT?

By Louis Broter, M.D.,

Assistant to the Gynaecological Department of the Good Samaritan Dispensary, New York City.

Most of the text books teach us that irritable bladder is a nervous disorder, characterized by a constant desire to urinate. According to F. Winckel, of Münich, irritable bladder should be diagnosed only by a process of exclusion. In the eyes of very few authors, the condition is pathological only when present in an exaggerated form. To my mind, the pathology of this condition has been somewhat, if not entirely, overlooked. A careful examination of the bladder would convince the writers that in every case of irritable bladder there is something more than a mere nervous condition. The frequent urination so often seen in pregnant women is not due to any neurotic condition, but solely to mechanical pressure upon the viscus by the anteflexed gravid uterus.

I am sorry to state that most of our medical men look upon medicine as a perfect science; consequently they do not like to describe a diseased condition when they fail to find a cause for it. This leads them to attribute everything and anything they do not know to a nervous or reflex condition. If medical writers would make a more careful study of the pathology of the organ in question, the terms nervous or reflex would be used less frequently. My experience in this affection has taught me that in every case there is necessarily some pathological lesion on the inner surface of the wall of the bladder, situated usually at or near the neck. This was proven in every case in which a cystoscopic examination was made. The lesion results very frequently from any pressure upon the bladder, as from a displaced abdominal organ or tumor. The constant pressure upon the bladder tends toward the neck; this accounts for finding the lesion most usually at or near the neck. Among other causes may be enumerated bacteria, staphylococci, streptococci, bacteria coli, tubercle bacilli, gonococci, and proteus. Traumatism, such as a blow, fall, or kick in the hypogastrium, plays a great part in this affection. The introduction of catheters or other surgical instruments is also an etiological factor. Adjacent diseases and gonorrhea of the urethra are also factors in producing the lesion. The pathology of irritable bladder resembles very much ordinary cystitis. The mucus membrane of the diseased area exhibits redness, swelling, and an increased secretion of mucus. The diseased area is usually from a quarter to half an inch in circumference, round or oval in shape, and is situated at or near the neck of the organ. There may be a single lesion or several situated closely together. In subacute or chronic cases the region is brownish or grayish red. The urine shows mucus and a sedimentary deposit; frequently enough the urine is turbid and at times bloody. Occasionally the urine has an offensive odor from alkaline decomposition.

The first symptom experienced by the patient is frequent urination. As soon as the least amount of urine accumulates the patient has a desire to urinate. The act is usually attended with pain of a varying degree. Only a few cubic centimetres of urine are voided each time, and very often only a few drops. The patients also complain of heaviness and painful feeling in the hypogastrium. Microscopical examination of the urinary sediment shows a few round cells and desquamated spithelia from the diseased mucus membrane. From my description of the etiology and pathology it will be seen that I look upon irritable bladder as a mild form of localized cystitis.

When we speak of cystitis we understand an inflammation of the mucous membrane of the bladder, whereas in irritable bladder we have an inflammatory condition of a *localized area* of the mucus membrane.

In the treatment of this condition prophylactic measures are worth while considering. Instruments are to be introduced into the bladder with great care, and only after thorough sterilization. Every case of urethritis should be thoroughly treated. Great care should be exercised in the administration of toxic drugs, such as cantharides, balsamics and other agents capable of causing bladder irritation. All irritating foods, such as alcoholics, beer, acids, spices, etc., should be avoided.

A mild diet, such as soups, milk, etc., should be used, Local treatment is of the utmost importance. The results obtained from the treatment which I am about to describe have been most satisfactory. At the Good Samaritan Dispensary we followed the method in every case with brilliant results. The usual procedure is as follows: Place the patient on a table in the dorsal position, and wash the urethra and adjacent structures with a one per cent. solution of lysol. Introduce a sterilized glass catheter into the urethra and into the bladder; be careful not to carry any mucus or dirt which is usually found around the urethra. After you have introduced the catheter into the bladder draw off the accumulated urine. Now wash out the bladder three or four times with a warm saturated solution of boric acid, and then introduce an ounce of a one per cent. solution of silver nitrate, allowing this to remain iu the bladder for three or four minutes; draw off the nitrate of silver solution and introduce about three ounces of a two to ten per cent. solution of ichthyol in water, and allow this to remain in the bladder for at least half an hour. Very often it will be found that the patients experience severe pains while introducing the silver; this may be remedied by anaesthetizing the bladder previously with a one per cent. solution of cocaine. An excellent cystic sedative and anaesthetic consists of a four per cent. solution of antipyrine.

This treatment should be repeated every other day for about three or four weeks, when a permanent cure will usually result.

In conjunction with this treatment a simple alkali should be administered daily, such as sodium bicarbonate, liquor ammonii acetatis, or potassium citrate, etc. I am convinced that any physician who will try this method of treatment will obtain most satisfactory results.

273 E. Brodaway, New York City.

*TREATMENT OF GONORRHEAL RHEUMATISM.**

By JOHN A. SUTCLIFFE, A.M., M.D., Indianapolis, Indiana.

Consultant to Indianapolis City Hospital, St. Vincent Hospital, Union State Hospital, Protestant Deaconess Hospital and Indianapolis City Dispensary.

It may seem out of place to make the statement, that at the onset it must be borne in mind that rheumatism may attack an individual who has gonorrhea and not necessarily be gonorrheal rheumatism. However, this is an error which is occasionly made by those who are given credit for carefullness in diagnosis in other avenues of disease.

Symptoms of gonorrheal rheumatism may be manifest in rare instances during the first ten days of gonorrhea, when the poison is at its acme, and more frequently at some time previous to the acute stage. When a violent urethral inflammation is present, this condition must especially receive attention by the adoption of local irrigation, preferably by the bichloride of mercury solution, 1-40,000, twice each day, a quart of the solution being used at each treatment. This strength may seem mild, but it is potent. We should bear in mind that the weakest solution that is competent to destroy the gonococcus is the one to select and thus avoid unnecessary drug irritation. Too often drug inflammations are produced, thus aggravating the disease—a frequent error that I have observed. I use the Kiefer doubleway nozzle, believing it to be superior to all others. Internally, a capsule

*Reprinted from *The Medical and Surgical Monitor*, May 15, 1902.

containing methylene blue, oleoresin of matico and copaiba may be used, but the two grain doses of methylene blue three times a day overshadows the therapy of the other ingredients of the combination. This preparation obscures all thought of oil of gaultheria which is vaunted by some. Complications, of course, should, if present, receive due consideration by the adoption of appropriate measures.

Gonorrheal rheumatism may be recognized in the muscles, articulations, bursae, pericardium, endocardium, the deep structures of the eye or the meninges, but wherever manifest, we must remember that the gonococcus is the direct cause and exists in that locality, hence death to the gonococcus means the finale of the disease. This would necessarily indicate the line of treatment. The knee-joint is the one most frequently affected. The next in frequency are the small joints of the lower extremity; however, any joint in the body may be affected. In an affection of the knee-joint, pain may be relieved by hot or cold applications, the former having the preference. A good hot application is made of finecut tobacco and flaxseed meal in the form of a poultice in the proportion of one to five respectively. Belladonna ointment with two drachms of ichthyol to the ounce may be used. If there is a tense capsule as the result of effusion, aspiration is necessary, and if a repetition, then the joint should be irrigated with a bichloride of mercury solution 1-15,000. When pus forms in the joint, it is not due to the gonococcus independently but the pathogenic bacterium is an adjuvant. Hence, we have reason for the adoption of irrigation. If the progress of the disease is not arrested by this method, then incision into the joint should be made and proper drainage established. In such cases there is a tendency to fibrous adhesions which stiffens or produces ankylosis; oftentimes running a chronic course. At this stage of the disease treatment consists in passive motion, massage, stimulating lotions, hot air baths and electricity. Other joints than the one lastly considered require less active treatment and the outcome is more favorable. In reference to the more vital structures heretofore mentioned, a form of treatment should be adopted similar in nature to that from other causes, with the exception that it should be remembered that methylene blue is a wholesome agent and will give good results under these circumstances. If the fact that gonorrheal rheumatism seems to be aggravated each alternate day, perhaps due to the plasmodium of malaria, or perhaps there exists a malarial cachexia, then this agent is a twofold aid. As an antiperiodic, it certainly is akin to quinine, has none of the unpleasant after-effects, and all important, will not produce hematuria, but can be given when this condition is present. One more favorable result may be noticed; when pain exists, quite frequently this agent will give relief without the aid of any of the narcotics.

A rational method of treatment may be adopted and carried out to the letter and the results disappointing; the patient is anemic, emaciated, no appetite, loss of strength, low vitality, defective nutrition, in fact the restorative powers are sluggish. Such cases can be made to progress just as well as any others. The debilitated condition of the patient now needs attention. Such remedies as are classed as builders must be used. Malt, codliver oil, or the two in combination. If constipation exists, a combination of malt and cascara. The digestive functions may need attention. Lactopeptine, pepsine or the two with tinct. nuc. vom. A combination of malt, pepsin and iron may be indicated. Small doses of arsenic in the form of liquor potassa arsenitis, five drops three times a day after meals. Sulphate of strychnia, 1-30 grain three times a day. A neutral form of iron with arsenic and strychnia, will oftentimes be valuable. Aperient waters may sometimes be needed from the fact that the astringency of iron may cause some constipation which did not exist before its administration.

Good nutritious food should be selected and plenty of time to consume it. If possible, seek fresh air out-of-doors if weather and nature of case will permit. Perhaps light exercise, depending on locality and severity of ailment. Water is good, inside and out. It is a diluent, favors elimination, is the best beverage, use no other.

One word in reference to the salicylates in the treatment of gonorrheal rheumatism. I recently read an article on drugs in the diagnosis of disease in which certain therapeutic agents were used as a means of differential diagnosis, and I think it should have included the salicylates in gonorrheal rheumatism, not as a remedial agent by any means, but simply this: if the prescriber obtained good results it would be bona fide evidence that he had made an error in diagnosis, it was not a case of gonorrheal rheumatism but of the acute articular variety. The salicylates are negative in the treatment of gonorrheal rheumatism.

*THE LOCAL TREATMENT OF ULCERS.**

By CHARLES F. PARKER, M.D., of Boston, Mass.

While I am aware that there are any number of methods of treating ulcers, I thought it might be of interest to describe a mode of treatment in these cases which has been unusually satisfactory in my practice. I will refer here only to local measures, although the constitutional condition upon which the development of the ulcer often depends must receive an equal share of attention. An ulcer due to syphilis will not heal until specific medication has been resorted to, and this also applies to ulcers occurring in tuberculous, rheumatic and gouty subjects. This is a fact that is too often lost sight of In cases of so-called varicose ulcer it will often be found that the stagnation of blood in the veins, which is one of the chief factors in preventing the healing of the sore, can be, to a great extent, relieved by internal remedies directed to the digestive organs, the liver and kidneys. By relieving constipation, regulating the diet, and getting the patient to abstain from alcoholics and other stimulating drinks, much relief is afforded to the local condition, and if the patient be a sufferer from gout or rheumatism, the use of uric acid solvents will also contribute materially to the healing of the ulcer. In persons suffering from kidney disease, with more or less œdema of the limbs, a slight traumatism may be sufficient to produce an ulcer, owing to the low vitality of the tissues. Under these circumstances the administration of diuretics and cardiac tonics is indicated as a part of the treatment of the ulcer.

In regard to local remedies, I have for some time made use of europhen with very satisfactory results, and have been led to consider it the most efficient of all wound antiseptics. The virtues of europhen depend upon the manner in which its iodine constituent is separated. On contact with the wound secretions, europhen splits off its iodine gradually, but in sufficient amount to exert a marked antiseptic action without any concomitant irritation or toxic effects due to absorption. In this respect it differs from the other iodine derivatives, which even, when they contain larger amounts of iodine, do not liberate it as readily as europhen or in the same combinations. In all conditions in which iodoform is indicated, europhen will answer the purpose much better, because, while fully as efficient, it is non-poisonous, has little or no odor, and a much greater covering capacity, a given weight as compared with iodoform covering an area five times as great as the latter. Another advantage of europhen is its adhesive qualities, which enable it to stick well to both wound surfaces and mucous membranes; moreover, it does not cake, as some powders do.

Europhen is employed by me in the powder or as an ointment of from 1 to 10 per cent., or according to the exigencies of the case. The 5 per cent. ointment is very useful as a dressing in burns. The greatest usefulness of the drug, however, is in the treatment of chronic ulcers and those of a venereal character, and here it sometimes acts as a specific.

* Read before the Boston Medical Society.—*Medical Review of Reviews*, Fec. 25, 1902.

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Editorial.

THE PAPER BY Dr. LOUIS BROTER on irritable bladder, shows very clearly that this condition is more than a mere symptom, and that it is rather a localized cystitis dependent upon a variety of causes. With a distinct understanding of the pathological characteristics, his treatment by local medication with nitrate of silver and ichthyol after a preliminary irrigation of the bladder with a saturated boric acid solution appears indicated and well worthy of a thorough trial.

* * *

THE TREND OF modern medicine is progressively towards practical prophylaxis. In the contribution by Dr. WM. COWEN on trachoma, the difficulties attendant upon eradication of disease and the great goal to be sought for, namely, prevention, are discussed. The records of the Board of Health show that this condition is very prevalent in our public schools, more so than even the reports indicate, since only severe cases are recognized and excluded. His treatment with glycerite of tannin in preference to disfiguring and painful surgical intervention, and to irritating caustics, has much to recommend it, in that it is new, simple, painless, efficient, and easily carried out. It seems as if the local authorities would benefit the community by establishing trachoma schools, as it were, for these unfortunates, in order that their education might not be neglected and the danger of spreading the contagion might be reduced as much as possible.

* * *

NO MORE TANTALIZING affection exists in the realm of gynecology than pruritus vulvae. We are pleased to present in this number a paper on this subject by Dr. S. W. BANDLER, who very properly calls attention to the futility in many cases of merely treating the vulvae with various medicaments, without directing all efforts to removal of the cause. Too often physicians fail to recognize the fact that pruritus vulvae is only a symptom secondary to other etiological factors and most frequently, as is shown in the paper, to irritatation of the urine or a leucorrheal discharge. With these facts before us, local treatment of the bladder and vagina appears the most rational and evidently the most productive of good results. In the treatment of leucorrhea, as outlined in the article, an attempt is made to suit the method of procedure to the nature of the discharge, each case varying as to whether leucoytes, epithelia, both combined, or bacteria predominate. This is a somewhat novel view of the subject and, being based on scientific microscopical date, is deserving of more extended observation and trial.

* * *

MANY SUBSTITUTES FOR silver nitrate have been advocated within a short space of time, one advantage or another being claimed for them. It appears, however, that in silver vitelline, as obtained by Drs. BARNES and HILLE, we have a new substitute for silver nitrate which, on account of its large proportion of silver, its non-irritating antiphlogistic and deep-penetrating properties, is likely to supplant all others heretofore recommended. Thus far experimentation with this salt has been limited to a select few, and the final decision of its usefulness must be reserved until the market places it at the disposal of the profession at large.

Incontinence of urine in children frequently proves resistant to treatment. In an abstract of a paper by G. Frank Lydston attention is called to the importance of removing the cause if possible, and to the various measures—urethral sound, deep lumbar injections of strychnine, urotropin, local treatment, etc.—suitable for different cases. A remedy which has recently found great favor is rhus aromatica in doses of five to twenty drops, and this is worthy of trial when all else fails.

* * *

The treatment of gonorrheal rheumatism as outlined in the paper by Dr. Sutcliffe calls attention to the value of several factors—proper diagnosis, prompt attention to the cause, the efficacy of methylene blue, rest and tonics, and the use of the salicylates in differential diagnosis. No mention is made of iodide of potash, and of alcohol compresses to the affected joints, two therapeutic remedies which frequently yield good results.

* * *

The most recent addition to the list of local anesthetics is nervocidine. Thus far its application has been limited to the eye and mucous membrane of the mouth, the subcutaneous injection not having produced local anesthesia. Its advantage over cocaine lies in the fact that anesthesia lasts longer, sometimes for two or three days; its disadvantages are the liability to cause irritation, slow action, and toxic properties.

* * *

Lysol is recommended by Dr. Broter, in his article in this issue on Irritable Bladder, as a part of the customary treatment at the Good Samaritan Dispensary, for washing the urethra and adjacent parts. Also by Dr. Bandler for washing the vagina. And on another page, quoting Prof. Ewald's Treatment of Chronic Gastritis, lysol is also recommended for washing out the stomach. There is no longer any question about the superior value—in effectiveness and comparative harmlessness—of this antiseptic and disinfectant. It should supplant carbolic acid completely.

THERAPEUTIC NOTES.

In ulcerations of the tonsils a five per cent. solution of methylene blue is said to act as an analgesic and antiseptic.

The most reliable emetics are apomorphin, ipecac, yellow subsulphate of mercury (turpeth mineral), sulphate of copper and alum.

The severe pain of gout has been promtly relieved by the application of lint saturated with alcohol.

In poisoning by nitrate of silver, the white of egg, or milk, on account of its albumen, is an excellent antidote.

When fats are indicated, olive oil will be found one of the most palatable and digestible.

Bichloride of mercury in doses of gr. $^1/_{40}$ gives good results in purpura hemorrhagica.

In the general anasarca of cardiac disease diuretin has acted promptly after digitalis and strophanthus had failed.

Glycerite of tannin is effective in spongy hemorrhagic and receding gums.

In cervical adenitis of the non-suppurative character, the iodide of potash ointment will often cause absorption.

One drachm of lead acetate and three drachms of alum to the quart of water, well stirred and filtered, is a most soothing lotion for burns, scalds, dermatitis, contusions, etc.

Vomiting after chloroform anesthesia may frequently be prevented by replacing the inhaler with a cloth saturated in vinegar, and allowing it to remain over the face for some time.

People who are the subjects of weak hearts should avoid overdistension of the stomach, and should always take their principal meal in the middle of the day.

Current Literature.

A New Substitute for Silver Nitrate.—Albert C. Barnes and Hermann Hille (*Medical Record*, May 24, 1902) after some years of chemical and pharmocological research, have obtained a preparation consisting of a derived proteid, heretofore undescribed, in chemical combination with silver. This new proteid being very soluble in both dilute and concentrate saline solutions, classifies it as a vitellin, and when a concentrated solution of silver nitrate is gradually added to a salt solution of vitelline until precipitation no longer occurs, and the precipitate is then filtered and dried *in vacuo*, a dark brown powder known as silver vitelline is obtained. Silver vitelline contains thirty per cent. of silver, and is extremely soluble; concentrated solutions do not precipitate albumen or sodium chloride, hence they cannot have any coagulating or caustic effect on mucous membranes.

Experimentation with this silver substitute has shown that solutions have an intensely penetrating action on albuminoid structures, even when they are hard, tough and tightly compressed. Reports of its use in the clinics of Dr. Edward Martin, H. M. Christian, G. K. Swinburne and M. Wassidlo show this salt to be valuable in the treatment of genito-urinary diseases, and in the various affections of the eye and nasal passages in which silver nitrate or one of its substitutes is indicated. In acute gonorrhea a one per cent. solution used by Dr. Swinburne diminished the discharge, reduced the number of gonococci, proved non-irritating and allayed the signs of inflammation.

Dr. Christian employed five per cent. solutions in acute gonorrhea and found them of distinct value in allaying inflammation, controlling the discharge and causing the disappearance of the gonococci. In cystitis a 1-1000 solution was absolutely devoid of any sign of irritation. It appears, therefore, that silver vitelline is valuable on account of its penetrating bactericidal properties, absolute freedom from irritating effects, and its power to allay inflammation.

Drs. Swinburne, Martin and Christian state that it is the best silver compound available for the treatment of gonorrhea. The authors in conclusion state that it is safe to predict that silver vitelline will practically revolutionize the treatment of certain inflammatory diseases of the eye, such as opthalmia neonatorum, purulent conjunctivitis, dacrocystitis, etc., in which silver is indicated and always employed, but in which a silver salt, which is freely soluble, penetrating to the deeper tissues, non-irritating, and at the same time containing a high proportion of silver, is regarded by oculists as a desideratum. Silver vitelline contains 30 per cent. of silver—about half of the amount in silver nitrate; hence a 50 per cent. solution of silver viteline corresponds to a 25 per cent. solution of silver nitrate, with greater penetrating action, but without the caustic irritating properties of the latter.

Hypodermoclysis.—In the *Philadelphia Medical Journal* for December 7, 1901, Dr. W. C. Hollopeter observes that this method of treatment offers a very wide field of usefulness in children's diseases. When the tissues are starved by the loss of blood from hemorrhage, or wasted by long sickness, they will drink up the fluid much more quickly than when the body is full of fluids and toxins, as in acute nephritis. The quantity of fluid injected in young children has usually been large, and he has found marvellous results to follow the use of one to two ounces. He has found it of especial value in the early life in the anuria, usually found in the first three weeks of life and due to deposit of uric acid crystals in tubes of the kidney from various causes; in uremic coma, in the different stages of nephritis following the eruptive diseases, in shock, and in marasmus,—the great stumbling block of the physician, which offers a very hopeful and encouraging field for its use, especially in

the last stage, when all forms of food are refused by the digestive tube. Here he has found the patient to respond in a marked degree to the remedy, and has been in the habit of using the concentrated sterile saline solution found in the market in one-ounce bottles, which, properly diluted with boiled water, offers the quickest form of preparation. When the tissues contain a large quantity of fluid, and the indication is to eliminate and dilute the toxic fluid, he is in the habit of preceding the hypodermoclysis with a glycerin enema which drains the tissues and affords a more rapid entrance to the subcutaneous injection. He feels that it is an unusually powerful remedy which has given him far better results than any other single therapeutic procedure heretofore tried in similar cases.—*The Cleveland Med. Journal*, April, 1902.

Treatment of Chorea.—D. J. McCarthy (*Medicine*, May, 1902) states that the treatment of chorea, whether it occurs in a child or adult, is practically the same. The best results are undoubtedly secured by rest in bed and seclusion until the movements have disappeared. This is of more importance in the adult, especially in women, than in children, because these young women are conscious of their ridiculous appearance, and the movements are aggravated by worry. Even when this is not the case the rest favorably influences the course of the disease. A light, nutritious diet with milk and eggs should be given, and every effort made to build up the general tone. Tea and coffee should be excluded from the diet. Any of the alterative and tonic drugs are of value; arsenic in the form of Fowler's solution is most frequently given, and usually with good results—three drops in a child, gradually increased by drop doses until fifteen is reached, less if gastric derangement or puffiness of lids occur. Patients taking arsenic over any length of time should be carefully watched, as arsenical neuritis may occur after prolonged administration of this drug for chorea. I have seen very extensive herpes zoster of the trun from small doses. The bromides an chloral are sometimes of value when th movements are intense, or where the pa tient is restless, fretful, and sleeples Trional, acetanilid, and quinine are als used. Donovon's solution (liquor arsen et hydrargyri iodidi) is a useful drug, bu requires careful attention in its administra tion. The iron preparations are valuabl in anemic patients. The bromide of iron beginning with five grains and rapidly in creased to twenty grains, gives goo results in such cases. Bathing is an im portant element in the treatment of th severe cases. The soothing influence o a warm bath upon the movements sometimes marked. The wet pack is als of considerable value. Many mild case which have persisted in spite of Fowler solution yield readily when the child compelled to remain in bed twelve hour during the night, and to lie down for a least two hours during the afternoon, wit the minor regulations of the diet abov noted.

The Internal Use of Tincture of Iodin —Dr. Paul Richter (*Deut. Aerzte. Zeit* 1902, No. 4) makes a plea for a revival o the internal administration of the tinctur of iodine in syphilis. He reports a serie of one hundred tertiary cases in which h gave ten drops of the German preparatio three times daily, increasing five drop weekly until thirty drops were taken thre times a day, always after meals and i milk, wine, beer, coffee, or water. Th patient during the course of treatment con sumed about three and a half ounces o the tincture or two and a half drachms o pure iodine. Most patients showed a improvement of the appetite and an in crease of body weight. Many who coul not tolerate the iodide of potash retaine the tincture. The author is of the opinio that the dose may be safely increased t thirty drops three times a day, that th tincture is often well borne when pota sium iodide is not, and being cheaper an producing equally good results, the tin ture is to be preferred to the potassiu salt.

THE TREATMENT OF CHRONIC GASTRITIS.—Professor Ewald, of Berlin (*International Medical Magazine*, December, 1901), sets forth his ideas of the treatment of chronic gastritis as follows:

Chronic gastric catarrh has two results which require treatment: (1) Diminution in the production of HCl and pepsin; and (2) weakening of the motor function of the gastric musculature.

(1) The disturbance of the secretory function of the gastric mucosa is best influenced by HCl, given in such quantities that the deficit of HCl will be fully compensated. I administer, therefore, three times after each meal at intervals of ten minutes, as many drops of dilute HCl in a half glass of water as the patient can take without having too sour a taste in his mouth. This does not bring the percentage of acid in the stomach to normal. To do this the best method is to pour directly through the stomach tube into the stomach a 0.2 per cent. HCl solution. I have seen very excellent results in some cases in which I have given 300 c.c. of such solution twice a day after two larger meals.

Besides supplying the lacking or insufficient glandular secretion, one may also employ means which directly excite the activity of the gland cells. Here belong the bitters, among which I prefer especially the condurango bark. I usually have 20 to 30 grams infused in 300 c.c. of water for twelve hours and evaporated to 150 c.c. by gentle heat. It is advisable to give this infusion at the same time with another remedy which

(2) Increases the mobility of the gastric musculature. Tincture of nux vomica is best for this purpose. I put 5 grams of the tincture with 5 grams of dilute HCl into the above infusion. There are also other measures which act upon the mobility of the stomach. Here belong (*a*) massage and (*b*) electricity.

(*a*) Massage performed by skilled hands—but only then—is very valuable. It strengthens not only the tone of the gastric musculature, but it forces on the contents of the stomach into the gut in a purely mechanical manner, and at the same time it stimulates the intestinal peristalsis, so that the constipation is favorably influenced.

(*b*) Regarding electricity, I use, whenever possible, the intragastric method. One electrode is introduced into the stomach, which is previously well washed out and filled with water, the other placed upon the surface over the belly. I prefer, where I wish to exercise a stimulating influence, the faradic current; only where a quieting effect is desired do I use the galvanic current, and then the anode is introduced into the stomach. A current strength of from four to five milliamperes is used, the duration of each sitting being from three to five minutes.

The gastric fermentations are the result of the stagnation of the stomach contents and of the deficient HCl secretion. The objects to be attained by our therapeutics then are clear:

(1) The removal of the fermenting masses.

(2) The restriction of the fermentations actually in progress.

(3) The prevention of new fermentations.

I. The first indication will be best filled by washing out the stomach. As a wash-water we may use a solution of the antiseptics, *e.g.*, 2 per cent. boracic or salicylic acid solution or 1 per cent. solution of lysol. As a rule, the patients obtain greater relief when the stomach is cleansed of its contents for the night, so that sleep is not disturbed.

II. While the washing out removes the cause of fermentation, at least for the most part, it limits also the production of new fermentations. We may assist this action by the simultaneous administration of internal antiseptics. For this purpose I employ a powder such as the following:

Resorcini resublimati	5.0
Bismuthi salicylat	10.0
Natrii bicarbonat	15.0
Sacchari albi	15.0

M. Sig.: Take a small teaspoonful every two hours.

This powder can be taken with the drugs mentioned above, the condurango decoction, etc.

Especial care is to be paid to the regulation of the bowels, which in chronic catarrh are generally irregular and as a rule constipated.

III. The regulation of the diet constitutes a most important matter in the treatment of gastric catarrh. Patients with catarrh of the stomach should never eat until completely satisfied, but should cease at the first sensation of fulness. There should be sufficiently long and regular intervals between the meals. Beverages should be lukewarm, and strong alcoholic and carbonated drinks should be prohibited. Proper care of the teeth and sufficient mastication are essential. We forbid hard boiled eggs, stringy meat and all meat and fish which are too fat. Soup from red meat is unsuitable, but this is less the case with clear bouillon from the flesh of fowls and veal. Unirritating and yet nourishing meat products are gelatinous soups and jellies and fat sparing gelatin.

The manufactured foods, such as pepton preparations, nuttose, somatose, etc., can be used with advantage. In the other class of aliments stand the products containing carbohydrates—vegetables, fruits and legumens. Their digestion should take place easily under the given conditions, because in catarrh the HCl is lacking. All fresh bakery products are to be avoided.

Vegetables are on the whole digestible if they are cooked in salted water without much fat, yet those of the cabbage family are to be avoided.

The same applies to the legumens. On the other hand, a good food, though when long continued not very acceptable, can be made from the so-called leguminous meals which are now often to be had in the shops.

Milk, theoretically, should be the best food of all. It is, unfortunately, not tolerated by many, or can be taken only a short time. To live on milk alone requires a much larger quantity than the capacity of the human stomach permits. Still, milk, by adding the milk-powder, that is, milk evaporated and pulverized, gives a higher nutitrive value.

Important as is a proper diet, equally important is it to allow a return to the usual diet at the proper time. Most patients are, indeed, ready and eager to return too soon to their old diet. Still there are those who, by following out a restricted diet for an unnecessarily long time, have been so weakened that their original gastritis has at last developed a nervous dyspepsia or a state of universal debility which can only be corrected by a positive change of regimen.—*Medical Review of Reviews*, Feb. 25, 1902.

Acute Nephritis in Children.—Powell says that the treatment consists of rest in bed between blankets, milk diet, water drunk freely, and at the start, a calomel purge followed by a mild saline, such as liquid citrate of magnesia. The body may be sponged with warm water, or a warm bath given once or twice a day, precautions being taken to avoid chill. A non-irritating diuretic is the citrate or bitartrate of potassium, which may be given in water with lemon juice and sugar. The severe cases with dropsy, fever and suppression of urine must be treated actively by dry cups on the lumbar region, by purgation with an active saline (magnesium sulphate), and by free sweating by a hot air bath or hot pack. A daily irrigation of the colon with normal salt is of value. If uremic symptoms set in, bleeding is the most certain means of relief, two to six ounces of blood being drawn from a child of five years. A full and bounding pulse requires nitroglycerin; threatened convulsions demand bromides and chloral by enema. The patient should be confined to bed as long as there is a trace of albumin in the urine, unless chronic nephritis is seen to have developed. The post-nephritic anemia calls for iron, preferably Basham's mixture.—*Kansas City Medical Record*, April, 1902.

HINTS FOR DYSPEPTICS.—*Public Health Journal* advises the following mode of life for dyspeptics: Eat slowly, masticating the food very thoroughly, even more so, if possible, than is required in health. The more time the food spends in the mouth, the less it will spend in the stomach. Avoid drinking at meals; at most take a few sips of warm drink at the close of the meal, if the food is very dry in character. In general, dyspeptic stomachs manage dry food better than that containing much fluid. Eat neither very hot nor cold food. The best temperature is that of the body. Avoid exposure to cold after eating. Be careful to avoid excess in eating. Eat no more than the wants of the system require. Sometimes less than is really needed must be taken when digestion is very weak. Strength depends not on what is eaten, but on what is digested. Never take violent exercise of any sort, either mental or physical, either just before or just after a meal. It is not good to sleep immediately after eating, nor within four hours of a meal. Never eat more than three times a day, and make the last meal very light. For many dyspeptics, two meals are better than more. Never eat a morsel of any sort between meals. Never eat when very tired, whether exhausted from mental or physical labour. Never eat when the mind is worried or the temper ruffled, if possible to avoid doing so. Eat only food that is easy of digestion, avoid complicated and indigestible dishes, and taking but one to three kinds at a meal. Most persons will be benefited by the use of oatmeal, wheat meal, cracked wheat, and other whole grain preparations, though many will find it necessary to avoid vegetables, especially when fruits are taken.—*Canada Medical Record*, March, 1902.

FORMALIN IN SKIN DISEASES.—Heinrich Loeb (*St. Louis Medical Review*, April 5, 1902) says that among the great number of new remedies which are daily being brought to the notice of medical men, there is a preparation which, more especially in dermatologic treatment, has met with but slight and individual notice, but which, in his opinion, is deserving of far greater appreciation—namely, formaldehyde, or its 40 per cent. aqueous solution, called formalin. The high appreciation of formaldehyde is evident from the fact that in Hager's "Manual of Pharmaceutical Practice" there are enumerated twenty-nine formalin derivatives or compositions respectively, among them glutol, dextrinoform, amyloform and holzin, which are said to offer the advantages of formalin in an agreeable or perfect form. Its varied use as a prominent disinfectant (for disinfecting rooms, sterilizing catheters, preparing catgut), as a hardening and preserving agent, therapeutically in gynecology (in colpitis and endometritis), surgery (in tumors not suitable for an operation), in the treatment of the conjunctiva, the nose, in dentistry, also in the treatment of gonorrhea (Lonarque, Howland), justifies one in expecting energetic curative powers from it.

In skin diseases, the use of formalin apparently has reached very modest limits. It is mostly employed in the treatment of hyperidrosis. Orth and Adler recommended it for tender feet, where above all, its deodorizing effect and drying properties have to be accentuated. In this connection observations made by Swiss army surgeons (Gehring) have confirmed the superiority of formalin and its influence on the increased marching powers of the troops. Hirschberg employs it in a 50 per cent. alcoholic solution for night-sweats of phthisical patients, painting the perspiring parts in small divisions in order to protect the patients from the irritating vapors. Tippel used formalin as a prophylactic in decubitus. Gaylord, Frank, and Daniel utilize the mummifying property of formalin in case of acuminate condylomas, uclus molle, and warts. By means of undiluted formalin the condylomas or the ulcus surface become scabbed and disquamate. This process is very painful, and may not, therefore, come into extensive use.

New Local Anæsthetic.—The *Lancet* in a recent number writes of a new local anæsthetic procured from a plant named "gasu-basu," a native of India, the active principle of which is an alkaloid. The English journal says that experiments were made with a salt obtained by treating the alkaloid with hydrochloric acid. The salt has been named nervocidine. In weak solutions it produced a marked local anæsthesia of the cornea of warm-blooded animals. Two drops of 1-20 per cent. solution applied to the human conjunctiva produced a burning sensation, accompanied by lachrymation, and followed, after twenty minutes, by anæsthesia of the cornea, lasting for five hours. After seven hours the cornea regained its normal condition. A 1-10 per cent. solution of nervocidine brushed over the mucous membrane of the cheek caused local anæsthesia of the brushed surface, accompanied by loss of the sensation of taste and the perception of touch, but without loss of the perception of heat and cold. Subcutaneous injections of the drug have not, as yet, been successful in producing local anæsthesia in animals. The general action of nervocidine on the system was that of a toxic which, by paralyzing the motor centers of the nervous system and of the peripheric nerves, caused death. All the experiments up to the present undertaken proved that nervocidine was a powerful local anæsthetic possessing a great advantage over cocaine, in that it produced a much more sustained action, for the effect of a ½ or 1-5 per cent. solution might last for two or three days. The new anæsthetic, however, has its drawbacks, such as the local irritation to which it gives rise, the slow production of a state of anæsthesia (from ten to twenty minutes being required), and a liability to cause nausea, vomiting, salivation, and other symptoms of general poisoning.

A local anæsthetic, whose properties last for such a length of time as that described above, might be of the utmost value to surgeons, and especially to ophthalmologists. There can be no doubt that more will be heard of nervocidine, when it will be easier to pass a competent judgment upon it.

Treatment of Acute Suppuration of the Middle Ear.—A. E. Prince (*Medical Fortnightly*, April, 1902) writes that: The treatment of acute suppuration, or the inflammation previous to suppuration is very important to the general practitioner, for these cases almost always fall into his hands during the acute stage and a timely application of appropriate remedies will, in the most cases, yield good results.

Although not found in the text-books, I will venture the assertion that the remedy first in importance is atropine (alkaloid) dissolved in castor oil.

The practice followed at present in at least ninety per cent. of acute tympanitis, is the introduction of sweet oil and laudanum. I could never understand the mental operation which leads a physician to employ opium in the ear, for it is not absorbed to any extent, and if my knowledge is correct, opium must exercise its influence on the brain center. It is my opinion that the benefit from laudanum and oil is due to the oil, the ameliorating virtue of which is due to the fact of its being used in the ear warm. I would, therefore, omit the opium, and, if needed, would use it hypodermically.

The virtue of the oil is greatly enhanced by the addition of atropia which acts locally. (Bear in mind that the sulphate will not dissolve in oil, and that the alkaloid must be employed.)

My experience with atropia in the treatment of the middle ear inflammation dates back about ten years to a patient who was in the sanitarium at the time he developed an acute and exceedingly painful inflammation of the drum. I had a one per cent. solution of atropia alkaloid dissolved in ol. ricini, which I very often employed in the treatment of iritis.

I decided it would be rational to use this oil solution, because by using the oil

the atropia would be carried into the drum cavity, which could not be accomplished by a watery solution of the sulphate.

Accordingly I commenced using the warm oil solution. The result was like magic. In a short time the pain had subsided, and did not recur. Since that time this remedy has given such satisfaction that during the past eight years I have recommended it as routine treatment in mastoiditis with dry heat, for acute inflammation of the middle ear.

It is fortified with dry heat, either applied by means of hot water or salt bag. In the majority of cases when used at the onset it will control the inflammation, and prevent perforation. In some cases in which an idiocyncrasy exists, sufficient atropia, when used in this way, will enter the system, and produce constitutional effects. In small children I usually employ a half per cent. solution.

Should atropia and heat fail, it is probable that suppuration has taken place. That being the case, perforation will probably take place either spontaneously or after a timely paracentesis.

MIGRAINE.—

℞	Sodium Bromid	8,0
	Tinct. Strophanthus	2,0
	Cocain Hydrochlorate	0.1
	Orange Flower water	180,0

M. Sig.: Tablespoonful, t. i. d., in milk.
—KONVALECKY.

INVOLUNTARY MICTURITION IN CHILDREN.—G. Frank Lydston (*Pediatrics*, Jan. 15, 1902—*Cyclopedia of Medicine*) states that one of the first steps should be to correct any condition of malassimilation or debility which may exist. Sources of local irritation having been excluded, the condition should be treated as a pure neurosis. One of the best remedies is the daily injection of full doses of sulphate of strychnine in the lumbar region.

In cases of involuntary micturition dependent upon chorea the usual measures for the correction of that condition should be adoptad: cold bathing, massage, codliver-oil, arsenic, and antispasmodics. Such remedies as the bromides, valerian, asafœtida, and camphor are of special service. A remedy which has proved of special service in the forms of enuresis due to hyperæsthesia of the vesical neck is tincture of cantharides in minute doses. Where hyperacidity of urine exists, this may be combined with acetate or citrate of potassium or lithium. The lithium salts are of special value where there is a gouty or rheumatic diathesis. The salicylates also come into play here. Such tonics as the mineral acids, quinine, and iron, with a liberal dietary of fat, and perhaps the administration of codliver-oil are demanded in many cases in which malnutrition is a prominent factor. Ergot is very often useful. A very valuable remedy in purely neurotic cases, and especially in those accompanying chorea, is santonin in full doses; this independently of the existence of intestinal worms. In cases of phosphaturia a diet of proteids with the administration of mineral acids has a much more limited range of value than authorities on therapeutics seem to believe. While it does act favorably, it is in many cases of only temporary benefit.

Where the involuntary micturition is due to the irritation of saccharine urine, as in diabetes mellitus, or the rapid entrance of urine of low specific gravity into the bladder, as in diabetes insipidus, the primary condition demands correction. Urine of extremely low specific gravity and consequent non-irritating character is often not so well tolerated by the bladder as is a more concentrated and consequently more irritating urine. The reason for this seems to be the fact that in cases of diabetes insipidus and allied conditions the urine is secreted so rapidly that the bladder does not have time to accommodate itself to contents.

In by far the majority of instances local treatment is required, and its neglect is the explanation of frequent failures in the management of this condition. The necessity for local treatment in cases of in-

voluntary micturition due to an irritated condition of the genito-urinary tract is obvious; thus, an operation for stone, the application of silver to the vesical neck, or surgical intervention for the relief of diseased kidneys may be necessary.

The urethral sound is one of the most valuable measures for the treatment of a large proportion of cases of involuntary micturition in children. All sources of reflex irritation should be relieved; the prepuce, if phimosed and redundant, removed; and all adhesions separated. The meatus, if narrow, should be cut. Carunculæ of the urethra and preputio-clitoridal adhesions may demand attention in female children.

Next to the sound, the most efficacious method of treatment in the purely neurotic cases is the injection of strychnine beside the spinal column in the lumbar region. The dosage is to be in proportion to the age of the child; but, as a single daily dose is given, a larger quantity can be administered than where it is given internally three times daily. The injection should be made deeply into the substance of the erector spinæ muscle, and as close to the spinal column as possible.

Where vesical catarrh is a factor in the cases, and especially in cases where the urine is alkaline or neutral, urotropin is often of value in connection with the usual local measures for the correction of the condition.

Malarial Hepatitis.—

℞ Hydrarg. chl. mitis .....gr.xij
Pulv. cascarae,
Pulv. rhei .....āā gr.ix
Pulv. belladonnae .....gr.i
M. Ft. caps. No. iii.
Sig.: One every morning.

—Lemanski.

Treatment of Scarlet Fever.—W. W. Robertson (*Pediatrics*, March 1, 1902) says, the treatment of scarlet fever is mainly symptomatic, associated with vigorous nursing, which will guard against complications.

The patient should be isolated, if possible, upstairs; if there be no upstairs, off into a room where all communication is cut off from the rest of the family who have not had the disease. Remove all carpets, lace curtains and such other furnishings of the room as can be gotten along without. The temperature of the room should be uniform, while effective ventilation should be secured. The diet should be liquid as long as the fever persists, and the best of all liquids is milk. though light broths are admissible with an abundance of water.

If the fever is high, say above 103°, cool sponging may be resorted to, but it must be remembered that high temperature in this disease is of short duration and incapable therefore of the mischief it may cause in the long-continued febrile diseases like typhoid fever.

Very high temperature, such as 105°, with meningeal symptoms, may require the bathtub or cold pack, but the temperature of the former should not be as low as that for typhoid fever. It is safer to put a patient in a bath at 90° and gradually reduce the temperature. The warm bath allays the irritation of the skin, but this is as well accomplished by inunction with cold cream and sweet oil, and this unguent is important for another purpose as soon as desquamation takes place to keep the scales from flying about and spreading the contagium.

An ice-cap may be applied to the head if the temperature is high, and especially if there are head symptoms. While cool applications are allowed during fever they are positively contraindicated in its absence, as they may aid in the development of complications of nephritis and otitis. Fever is best controlled by these measures, but it is desirable to give medicines which tend to the same purpose, especially if they dispose to diuresis as well. Hence, the officinal solution of citrate of potassium or of the acetate of ammonium combined with the spirits of nitrous ether with a little flavoring syrup

is useful. The throat symptoms require to be treated according to the degree of their severity. Iron and potassium chlorate may be added to the above mixture. Constipation should be guarded against and frequent aperients are indicated. If more active local measures are needed the throat may be sprayed frequently with peroxide of hydrogen (1 to 3), or with a weak bichloride of mercury (1 to 5000 sol.), or carbolic acid spray (1 to 50 or 60). I prefer the peroxide of hydrogen. For local application (spray) cold water applications and even ice to the exterior of the throat are very comforting to the patient.

Very efficient and soothing is a bandage for the throat, with pockets opposite to the tonsils, into which pieces of ice are placed and the whole covered with a dry towel; or little India rubber ice-bags may be similarly used.

In adynamic cases stimulants and restorative treatment in general are indicated.

The proper treatment of the throat tends to save the ear, but should the middle-ear become involved, the membrane should be watched daily and if the tension is extreme perforation practised, even more than once, if needed. Too little attention has been paid to this complication and, if the circumstances permit, an aural surgeon should be called in. The prophylaxis against nephritis should be most careful, whatever may be the immediate cause of the renal involvment, it is certain that cold often becomes its exciting cause. Hence, the patient should be scrupulously guarded against draughts, and tedious as it may sometimes seem to mother and child, "six weeks in the room" is a precaution which will avert many cases of nephritis.

In addition to the milk diet, which is an efficient prophylactic against nephritis, I am in the habit of giving a moderate dose of digitalis, say 3 to 5 drops two or three times per day to aid in maintaining a free circulation of blood through the kidney.

SELECTED PRESCRIPTIONS.

CYSTITIS.—

℞ Acid Benzoic..... ʒ ijss
Sodii Biborat..... ʒ v
Olei gaultheriae..... ♏ xv
Aquae.....ad. ℥ ij
M. Sig.: ʒ i after meals.

—*N. Y. State Journal of Medicine.*

GOUT.—

℞ Pilulae Hydrargyri,
Extracti Rhei,
Extracti Colocynthidis Co., āā gr. xx
Extracti Colichici Acetici..... gr. xv
M. Ft. Pil. No. 15.
Sig.: One pill every 3 hours.

—BENJAMIN BRODIE.

CHOREA.—

℞ Tinct. Belladonnae..... ʒ i
Liq. Potassii Arsenitis..... ʒ ij
Syr. Hypophos. Comp.....q. s. ℥ iv
M. Sig.: ʒ i, t. i. d.

—DA COSTA.

GONORRHEA.

℞ Methylene Blue.....gr. i
Oil of nutmeg.....gtt. ij
Oil of Sandalwood.....gtt. iij
M. Ft. Caps. No. 1.
Sig.: One capsule t. i. d.

—O'NEIL.

CHAFING.—

℞ Ichthyol,
Comp. tinct. benzoin,
Boric acid.....āā ʒ i
Petroleum. ..... ℥ij
M. Sig.: Apply twice daily,

—R. B. ELDERICE.

CORYZA.—

℞ Alum.....gr. iij
Morphin Sulphate.....gr. ij
Cocain Hydrochlorate.....gr. i
Camphor,
Bismuth Subnitrate.....āā ʒ i
M. Sig.: Use as a snuff.

—*Practitioner.*

CARBUNCLE.—

℞ Hydrargyri Oxidi. Rubri... ʒi—ʒij
Mentholis.....gr. xx
Pulv. Camphoræ.....gr. xv
Cocain Hydrochl.....gr. x
Acid carbol..... ♏ xx
Morph. Sulph.....gr. v
Vaselini..... ℥ i
M. Sig.: Apply on gauze four or five times daily.

—L. B. YOUNG.

Book Notices.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS, comprising ten volumes on THE YEAR'S PROGRESS IN MEDICINE AND SURGERY.—Issued monthly under the general editorial charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume III. The Eye, Ear, Nose, Throat, edited by CASEY A. WOOD, C.M., M.D., ALBERT H. ANDREWS, M.D., T. MELVILLE HARDIE, A.M., M.D. December, 1901. Chicago: The Year Book Publishers, 40 Dearborn Street.

The third of these valuable and practical year book series is, in reality, three in one, embracing, as it does, a compilation of the year's advance in the realms of ophthalmology, otology, rhinology and laryngology. Despite the difficulty of condensing such a variety of subjects, the editors have covered the ground very completely. In ophthalmology, the progress in anatomy, physiology, operative work, hygiene, therapeutics and bacteriology are concisely given; in otology, the external and internal ear, the mastoid, brain abscess and sinus thrombosis together with mechanical contrivances and operative technique are found discussed, while in the nose and throat chapter a resumé of the newer ideas as to diagnosis, and treatment of conditions of the nose and its accessory cavities, naso-pharynx mouth, tonsils, larynx and trachea will be found. The abstracts on laryngeal stenosis and intubation are new and interesting, as are those on Angina of Vincent, which unfortunately has received too little attention in this country. This volume can be recommended as worthy of a place in the library of the general practitioner as well as the specialist.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS, comprising ten volumes on THE YEAR'S PROGRESS IN MEDICINE AND SURGERY.—Issued monthly under the general editorial charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume IV. Gynecology, edited by EMILIUS C. DUDLEY, A.M., M.D., Professor of Gynecology, Northwestern University Medical School, Gynecologist to St. Luke's and Wesley Hospitals, Chicago, with the collaboration of WILLIAM HEALY, A.B., M.D. March, 1902. Chicago: The Year Book Publishers, 40 Dearborn St.

The association of the name of Dr. Dudley with this volume is in itself a sufficient guarantee of the excellent quality of the subject matter presented. The editors have certainly realized their intention of summarizing the most noteworthy contributions to gynecology, made during the past eighteen months. Throughout the volume it is seen that the recent literature shows the advances mentioned in the introduction, namely, application of scientific gynecology to sociologic problems, the differentiation of pelvic symptomatology, diagnosis, prognosis and treatment, the critical study of the statistics of infections, neoplasms and displacements, and a careful balancing of the relative indications for gyecologic operations. Brief editorial comments are scattered throughout the work. The illustrations of instruments, operations, and pathological conditions are the equal of those in works of a more pretentious nature. It is noted with satisfaction that many of the operations perfected and advocated by pioneer American gynecologists are being rediscovered at home and abroad. The editors are to be congratulated upon their management and presentation of the subject.

CLINICAL NOTES ON TANNIGEN.—E. Sieger (*Wiener Medic. Blaetter*, No. 46, 1900) treated 12 children with summer diarrhea by the use of tannigen. He gave two grain doses to infants, and administered the drug in milk. For older children he gave the tannigen in the powder form, giving it always after meals. He noted good results two hours after the first dose. It was also satisfactory in the more chronic catarrhs of the intestines.—*Archives af Pediatrics*, August, 1901.

The American Therapist.

A MONTHLY RECORD OF MODERN THERAPEUTICS,

WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

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Original Articles.

FISSURED NIPPLES: PROPHYLAXIS AND TREATMENT.

By SAMUEL M. BRICKNER, A.M., M.D.,

Gynecologist to Mt. Sinai Hospital and Good Samaritan Dispensaries, New York.

It is granted that a modern obstetrician concerns himself with much more than merely the safe delivery of his patient. None of the duties which he imposes upon himself is of more direct or indirect importance than attending to the provision of the nursing of the new-born child. Not only should he insist upon the mother's nursing her offspring when this is possible, but he must see to it that her breasts and their sensitive appendages, the nipples, are rendered immune to injury in the fulfilment of the function. The sequels of fissured, and, in consequence thereof, frequently infected, nipples are so far-reaching that the prevention of the accident is worthy of all the care that can be bestowed upon it. It is scarcely necessary to call attention to these results which may terminate in suppurative mastitis with its attendant dangers, and the enforced withdrawal of the child from the breast, with all its possible evil sequels.

We will assume that the nipples of the average woman are capable of withstanding the inroads made upon their epithelium by the continuous maceration of the suckling child and the flow of milk. Naturally and physiologically this should be so. When a multipara, therefore, who has nursed several children and whose nipples seem in all respects normal and healthy, presents herself, frequently the only caution to be given her is to keep the nipples clean by daily washing with soap and water.

In the case of a primipara, however, who has naturally never had the experience of nursing, or of a multipara who has had trouble of this kind, even though the nipples seem well developed and capable of going through the strain of nursing for some months, it is my invariable custom to advise her as follows: I prescribe pure lanoline. Of this she is instructed to take a small quantity on the thumb and forefinger of her right hand each night before retiring, and seizing each nipple in turn, to rub the lanoline well into the interstices of the nipple, simultaneously drawing the nipple out and slightly rotating it. In the morning, the nipple is washed with soap and warm water. This procedure is begun about the sixth month and is kept up nightly until the birth of the child. The result is a prominent, erectile nipple and a sufficient hardening of it to withstand the traumata incident to nursing. At the same time, it does not become dried up and hardened to such an extent as the same manipulation with alcohol induces, and is therefore not so vulnerable.

In order to ensure additional safety after the confinement, I have the baby's mouth and the nipples washed with a saturated solution of boracic acid before and after nursing, and for the first two weeks keep the nipples covered with small compresses of sterile gauze during the intervals of nursing.

For six years I have followed this plan with scarcely any deviation in those patients whom I have seen sufficiently long before their accouchment to render it worth while. It has proven eminently

satisfactory in my hands and I have no hesitation in warmly recommending it. The use of the lanoline is, of course, not essential. Vaseline or any simple ointment will answer the purpose; but lanoline has these advantages in that it is cheap and is unknown to most patients, and for the latter reason will be more conscientiously employed by them.

The prophylactic treatment outlined above is efficacious also in making of a depressed nipple one that is useful. The drawing out process produces a nipple which the child can seize, and renders nursing a possibility in some instances in which it would have to be foregone.

The care bestowed upon nipples when their outer covering is once broken through and a crack or fissure once exists, cannot be too great. When, a day or two after confinement, a woman complains of a "drawing" or "cutting" pain in the nipples, they should be carefully examined, although nothing more may be the cause of the pain than the hyperesthesia due to the repeated use of a formerly unused organ. Should the pain, however, grow worse and even the smallest fissure be detected, the use of a nipple shield becomes imperative. At the same time, a compress of wet boracic acid should be laid over the nipple in the inter-nursing intervals, and the fissure should be touched with a twenty per cent. solution of ichthyol in water. This must be carefully washed away before each nursing, with green soap and water or boracic acid on a little cotton sponge, so that the milk shall not become impregnated with the taste of ichthyol.

Sometimes even the use of the nipple shield cannot be tolerated by the patient, so intense is the pain. In these instances, if the patient has not become too much demoralized, the affected area of the nipple may be touched with a ten per cent. solution of cocaine until it is anesthetic, when the excess must be washed away with a boracic acid solution. If the patient becomes thoroughly nervous and wrought up, however, at the mere thought of nursing, the function may have to be suspended for a few days, nursing continued from the unaffected breast, and a proper substitute in the form of artificially prepared milk given to the child. The treatment of the cracked nipple may then be made more energetic. The breast must be massaged in part and pumped in part, for if massage alone is practiced, the milk is likely to be so diminished as to interfere materially with its subsequent continuance. I employ massage and pumping both since the use of the breast-pump is usually painful, and carefully executed massage helps materially in relieving the distended mamma. The breasts must be encased in a suitable breast-binder (I have used the Murphy pattern for many years), the breasts first being brought well up on the chest so that the pressure of the binder shall be equally distributed. The ichthyol solution is then applied once in twelve hours, and is best done with a small applicator in order not to have it in contact with other parts than those affected; not that it is at all injurious to healthy skin, but its presence interferes with careful inspection. With the subsequent course of the condition, ending in suppuration, this article is not concerned.

With the use of these procedures, the most refractory cracked nipple will yield, as a rule, in two or three days, and by carrying them out in a rigid aseptic manner, mastitis will usually be avoided. The best treatment of fissured nipples, like that of many other pathological conditions or diseases, is prophylactic.

136 West 85th St., New York City.

Thiosinamine is a drug worth remembering when called upon to treat keloidal growths or hypertrophic scars following injuries, burns, operations, etc. When excision, electrolysis, cauterization or other measures have failed, the hypodermatic use of this drug, as outlined in the abstract on the subject, will sometimes effect good results.

THE MODERN TREATMENT OF ACUTE GONORRHEA.

By Abraham L. Wolbarst, M.D., New York.

It is universally accepted that gonorrheal urethritis, or Gonorrhea, can be acquired only from some extreme source in which the specific gonococcus of Neisser is present. It is, therefore, necessary to draw a sharp distinction between the truly gonorrheal inflammation of the urethra, and the non-gonorrheal inflammation, which is known as "simple urethritis." This distinction is clearly made when the specific germ is found in the urethral discharges, and positively identified with the proper staining methods. This having been done, there can be no doubt or error as to the nature of the inflammation.

The modern treatment of acute gonorrhea is based on this generally accepted fact that the mucous membrane of the urethra is attacked by a germ of more or less virulence, which results in an acute inflammation, accompanied by the production of pus. In this and other respects, gonorrheal inflammation does not differ from any other purulent inflammation, and in the main is subject to the same laws and conditions. It is therefore somewhat strange that, while all agree as to the best methods of treating purulent inflammations in other parts of the body, the same cannot be said concerning the purulent inflammation of the urethra, which we know under the name of "Gonorrhea."

There is a lamentable lack of unanimity as to the objective point to be aimed at in the treatment of gonorrhea, which accounts probably for the widely different methods of treatment recommended, and the unsatisfactory results of most of them.

To the writer it seems quite possible to combine the wisdom of various schools into one rational method of treatment, which aims not only at the destruction of the gonococci, but at the same time seeks to reduce to a minimum the pain, discomfort and complications, and the amount of damage to the urethral walls inflicted by them.

It goes without saying, that the first step in the rational treatment of gonorrhea should be to rid the urethra of the gonococci contained therein, as the causative factors in the inflammatory process. With this rational object in view, numberless irrational procedures have been suggested, some seriously, others with an unconscious element of humor. The so-called "abortive" methods, which have for their purpose the rapid elimination of the gonococci and their products, come under this head. With possibly one exception, they are extremely painful, they entail considerable sacrifice of time, and they are usually unsuccessful. The greatest value which they serve is to point out their uselessness and the utter impossibility of their employment in general practice. These "abortive" methods can only be employed, if at all, during the first or second day of the disease,—that is, before the gonococci have penetrated into the cellular layers of the urethral wall, or extended for a considerable period along the urethral canal. An old-time method, which has attained considerable vogue in certain quarters, is that known as the "silver nitrate" method. A solution of silver nitrate, 15 to 30 grains to the ounce, is applied through an endoscopic tube to the first inch or two of the urethra by means of an applicator carrying a small tuft of cotton saturated with the solution. The patient is then put to bed, and made as comfortable as possible by an icebag or iced lint applied to the penis to allay the severe irritation which follows this heroic treatment. In successful cases this inflammation passes off within a week or ten days, and the denuded urethral surface returns to its normal state.

In the great majority of cases, however, this commendable attempt to abort the inflammation fails. The gonorrheal inflammation breaks out with increased severity, and the patient goes through his gonor-

rheal attack in addition to having suffered the tortures of the abortive treatment.

A more rational and practicable method for the abortion of gonorrhea in its early stages is that of frequently repeated irrigations of the urethral canal with hot antiseptic solutions. Potassium permanganate solutions, 1-4000 to 1-1000, are usually employed, the irrigations being given two or three times daily for three or four days, after which their frequency is diminished. This method causes little or no pain, and has the additional advantage of being successful more frequently than the heroic and painful silver nitrate method.

Abortive treatment in any form, however, has its narrow limitations in practice, for comparatively few cases are seen by the practitioner early enough to indicate their employment. Moreover, the patients are rare, indeed, who will consent to having the silver method tried on them, with its strong probability of failure, and its sure exposure of the existing condition of affairs. On the other hand, the permanganate method requires so much time as to render it applicable in selected cases only. Systematic treatment is indicated, therefore, in the great majority of cases.

The primary indication in the systematic treatment of gonorrhea is complete rest.

This, however, is not usually possible to attain in practice. Men with gonorrhea, even if they do regard the inflammation as more serious than "a mere cold," will not go to bed unless forced to do so by an attack of epididymitis or prostatitis. The most that can be expected in this direction is that the patient will move about as little as his occupation will allow, that he will refrain from physical exercise of any kind that can be avoided, and that he will maintain his sexual apparatus, as far as he can control it, in a condition of complete rest. Dancing, "spooning," and every other pastime or occupation that brings the patient into the company of the opposite sex, is to be avoided. Alcoholic drinks are, of course, to be interdicted; yet, in spite of this dictum, it is an undisputed fact that a large number of men with acute gonorrhea drink beer, wine and whiskey without showing any particularly pernicious results. For those tractable patients who ask "what may I drink?" the best answer is, water—plain, cold water—in large quantities. This has the double effect of diluting and increasing the quantity of urine, and at the same time helping to remove the infectious debris from the urethral canal. The alkaline waters, so often recommended, are at times distinctly irritating, though they have considerable value, because of the moral effect which they sometimes exert on the mind of the patient.

The diet should be simple, and the bowels kept open; if necessary, a mild laxative should be prescribed,—the best and most commonly used laxative for this purpose is the familiar rhubarb and soda mixture. Daily hot sitz baths are extremely useful in keeping the patient clean and allaying the irritation in the deep portions of the urethral canal. The glans penis, and the preputial cavity should be carefully washed every few hours with warm water or weak bichloride solution. If this is faithfully performed by the patient, balanitis, with the further complications of phimosis and paraphimosis, will be prevented. Gonorrhea bags containing absorbent cotton are useful in that they receive the discharge, without contaminating the hands or the clothes of the patient; they also allow the discharge to pass out of the urethral canal without interference, thereby preventing retention and damming of secretions. The dressing recommended by Taylor is probably the most efficient method of dressing the penis. In a clean piece of old linen, or several thickne ses of absorbent gauze, about four inches square, a hole is cut just big enough to admit the comfortable passage of the penis. This is slipped over the glans, behind the corona, and the prepuce is then drawn forward. The discharges are accumulated in this dressing, which may be renewed at frequent inter-

vals. It should be unnecessary to add that the greatest care should be taken to burn all dressings, and thus prevent further contamination of the innocent.

These hygienic precautions having been taken, the therapeutic treatment next presents itself. Here several prominent methods appear for consideration, each of them enjoying more or less deserved popularity. The irrigation treatment, or Janet method, has become quite popular within recent years, and to a great extent deservedly so, for it has marked a distinct step forward in the treatment of gonorrhea. Potassium permanganate solutions are employed, ranging in strength from 1-6000 to 1-2000, beginning with the weaker solution and gradually increasing its strength. About a quart of the fluid, warmed to a temperature as hot as the patient can comfortably bear it, is used. The percolator or bag containing the fluid, is held from two to four feet above the level of the patient's bladder, the former height being used for irrigation of the anterior urethra, the latter for irrigations into the bladder. The patient having previously urinated, may stand, or preferably sit on the edge of a chair, legs outstretched, and back resting on the back of the chair. Between his legs he holds a basin, into which the fluid flows after it emerges from the urethra. The flow is regulated at the will of a simple spring or valve, under control of the surgeon's right hand, while the lips of the meatus urinaris are held in contact with the blunt irrigating nozzle with his left. These irrigations are administered every day, or preferably twice daily, for the first week or ten days, after which they are administered at greater intervals. By this method exceedingly gratifying results may at times be attained. If the anterior urethra alone be involved in the inflammatory process, the irrigation should be limited to this part of the canal; if, however, the posterior urethra has also been attacked, the entire urinary canal is to be washed out.

In spite of the at times brilliant results from this form of treatment, however, there are serious objections to it, which sometimes more than counterbalance its advantages. It is quite likely that irrigations of the anterior urethra force the gonococci backward into the posterior urethra, thus setting up that most common complication, posterior urethritis, with all the serious troubles that follow in its wake. It is not difficult to imagine such an extension of the inflammation,—in fact, clinical experience has often demonstrated the possibility of its occurrence. For this reason, it is extremely doubtful whether this treatment ought to be adopted in anterior urethritis.

Again, in acute urethritis, the irrigations often seem to aggravate the inflammation rather than alleviate it. The solution employed may be too strong, or the technic faulty; either condition is apt to increase the severity of the inflammation, and convert a comparatively mild anterior urethritis into a severe posterior urethritis.

In irrigating the posterior urethra, much damage may be inflicted as the result of improper handling on the part of the surgeon. Some practitioners seem to think it necessary to turn on a full current, and direct it forcibly against the cut-off muscle until the latter becomes paralyzed, as it were, and is forced to give way. There is no more certain way of inducing an attack of acute epididymitis than by attempting to "force" the compressor muscle in this way. There is absolutely no necessity for this procedure. The patient is made to wince and strain under the terrible pain, and voluntary relaxation of the muscle becomes impossible. The most satisfactory way of getting the fluid into the bladder with the least pain and discomfort to the patient is to have him breathe slowly and deeply, directing him at the same time to look intently at some object in the distance, so as to distract his attention from the irrigating process. The spring or valve is so manipulated by the surgeon as to permit the smallest possible

stream to enter the urethra. This is of the greatest importance. This fine stream enters the canal slowly, and meets with little or no opposition on the part of the cut-off muscle. The stream may be gradually increased to a slight degree, in order to save time in the procedure. It is well to remember, in this connection, that as soon as one feels that the compressor muscle is beginning to contract and offer resistance to the inward flow, the stream must be stopped immediately, and the irrigation nozzle withdrawn from the meatus.

Another serious disadvantage of the Janet method, as a routine form of treatment, is the development of the "irrigation neurosis," or habit, among patients, especially those who have been treated in dispensaries. With the flight of time, and the free "washing out" at the dispensaries, these patients acquire a pitiable desire to be "washed out" every day, whether they need it or not. This desire is very difficult to combat, and once established is very rarely broken up. For months these unfortunates haunt the dispensaries where this method of treatment is carried on as a routine, begging for "one more." In my experience, the kind and thoughtless clinical assistant has never been found wanting, who was only too happy to enhance his own reputation for kindness at the ultimate expense of the deluded patient.

It may be stated that the permanganate treatment is not indicated in acute anterior urethritis, except in those cases in which, by very frequent irrigations, the abortion of the inflammation is the object aimed at. For general use, there is a superior method, which, after ample clinical experience, has demonstrated that it possesses all of the advantages of the irrigation treatment, while it has none of the latter's disadvantages. This method consists of injecting into the anterior urethra a small syringeful of one or other of the new silver preparations, the most valuable of which is protargol. This preparation has passed beyond the experimental stage. Within a comparatively few days it destroys all the gonococci that it can reach, it controls the discharge admirably, and, best of all, it is practically non-irritant. If employed before the posterior urethra has become involved, this preparation will confine the inflammation to the anterior urethra in a larger proportion of cases than any other remedy or method of treatment. It should be used in ½ to 1 per cent. strength, injected three times daily, and held in the urethra from five to ten minutes. In about the third week of its use, when the urine has become almost clear except for some shreds, an astringent solution should be gradually substituted for it. Either zinc sulphate, ½ per cent., zinc sulphocarbolate, 1 per cent., or zinc chloride, 1 per cent., may be used with good effect for an additional period of from two to four weeks, at which time the urine will become clear.

If, in spite of this treatment, the inflammation extends into the posterior urethra, it goes without saying that these injections should be at once suspended, and irrigations of the entire urethra substituted, either with or without the use of a catheter. The supreme indication in posterior urethritis is to thoroughly flush the urethral canal from meatus to bladder as often as the canal will tolerate this proceeding. This is the only way in which the canal can be freed of its infectious debris, and surgically cleansed. With proper technic and a due amount of care, the dangers of this form of treatment may be reduced to a minimum. If the permanganate does not produce the desired effect after a fair trial, especially in the subacute stage, silver nitrate, 1-10000, may be substituted with surprisingly happy results. As a matter of fact it is often well to alternate the permanganate with the silver, using the latter every third or fourth day, in slightly increasing strength.

Unfortunately, the results of active treatment are not always what we should like to have them be. In spite of all our ef-

orts, or quite likely because of them, here are cases that do very poorly. One's attention is quickly attracted to these cases by their seeming obstinacy. The truth is that these cases are merely rebelling against what must be considered too much treatment. They must be let alone, and they will quickly come around. An internal antiseptic like salol, methylene blue, or urotropin, will often be sufficient to relieve a severe inflammatory process, which seemed to have been aggravated by the active treatment. A good rule to follow in this connection is this: When, in spite of the injections, or the irrigations, a discharge persists, and the urine remains cloudy, active treatment should be at once suspended for a few days and the effects noted. Further treatment will be indicated by these effects.

In every case of posterior urethritis it is imperative to examine the seminal vesicles and the prostate after having administered a mild cathartic. Should acute prostatitis develop, rest in bed, with cold rectal irrigations, will bring relief. This is to be followed in the subacute stage by gentle massage, at intervals of three or four days.

To sum up the treatment of acute gonorrhea in a few words, I should say:

1. The Janet method is not advisable as a routine method of treatment, unless employed with great care and skilled technic.

2. In anterior urethritis it is practically contra-indicated, except in the abortive method. It is invaluable in posterior urethritis.

3. Unless used with proper technic and a due amount of care, urethral irrigation without a catheter is fraught with the danger of serious complications.

4. Various neuroses follow its indiscriminate nse in dispensary practice.

5. Hand injections of Protargol, in ½ to 1 per cent. strength, are superior in anterior urethritis. They are extremely effective, while devoid of irritation or danger.

6. Under the employment of these injections, patients have practically no pain or discomfort, and virtually no discharge after the first week or ten days.

7. In uncomplicated anterior cases, the duration of the disease is from four to seven weeks, occasionally considerably less.

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*THE TOXIC EFFECTS OF TRIONAL.**

By E. Pierre Mallett, M.D., New York,
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There have been so many new hypnotics, antipyretics and analgesics introduced in recent years that it is somewhat difficult to define their true physiological action, and the symptomatology of their toxic dosage. This has been due largely to the fact that these new products have succeeded one another with such rapidity that their therapeutic status would hardly be established before they would fall into disuse by the introduction of another, for which even greater claims were made.

I have not been able to look up the literature of trional, but as I do not recall any article relating to its toxic effects, and as the dosage and the quantity of the drug consumed in this case were so large, its report may possibly be of some value in establishing and recognizing its toxic dosage and symptomatology.

The patient was a man of about 50 years of age, not addicted to the use of either drugs or intoxicants. Trional had been prescribed for him on a previous occasion in doses of from 15 to 20 grains, when suffering from insomnia, and its effects had been all that could be desired. At the time this patient came under my observation he was under a great mental strain, and was unable to sleep, and I might add that, while he did not come under my professional care for several days later, still I saw him frequently, and

* Reprinted from the *Virginia Medical Semi-Monthly*, June 14, 1902.

could observe his condition each day, until I was asked to take charge of him.

Being unable to sleep for several nights, he had bought an ounce of trional at noon on Wednesday, and not remembering, or being indifferent to the former dose, simply took it from a teaspoon. He slept all of that afternoon, and appeared at dinner rather late. He was quite uncommunicative, and ate very little, leaving the table and going to his room. He took another dose out of the teaspoon as before, and went to bed. He slept soundly until noon the next day (Thursday), when he got up and came down to luncheon. His condition at that time was quite noticeable, his face seeming slightly swollen, with puffiness about the eyes. His loss of muscular co-ordination was becoming very marked, more so in the movements of the legs and feet than of the arms and fingers. On being spoken to he would reply in monosyllables, was dull and apathetic. His walk was slow and uncertain, frequently steadying himself upon the backs of chairs, the doors and banisters, etc. He went to his room again after luncheon, and took another dose as before, and slept on until dinner time. He was aroused at dinner time (7 P. M.), and with difficulty managed to get downstairs. His condition was very noticeable to every one. He walked with great difficulty—not the uncertain, staggering gait of intoxication, but rather with the muscular weakness and in co-ordination of paresis. His apathy had deepened, so that he could not follow an idea; but on being spoken to he would rouse up sufficiently to make a monosyllabic reply, and relapse again into a condition of semi-coma. Walking was very difficult, seemingly due to his inability to raise the feet and to put them forward in stepping. Equilibrium was also disturbed; all movements were performed with great deliberation and seeming difficulty, apparently from complete muscular relaxation. Articulation was difficult and almost unintelligible (motor aphasia), though he himself said that his tongue was swollen. From a perfectly well and healthy-looking man in the very prime of life, he had, in the last three days, become like an infirm old man of eighty, or a hopeless looking paralytic.

At this point I was requested by his friends to take care of him. I found out both from the patient and his friends that he had taken very little liquor during the last three days, not enough to have any effect whatever in bringing about his present condition. I found that the box of trional which he had bought on Wednesday noon had been almost consumed in about two and a half days, there being only about 80 or 100 grains left of the original 480. His condition and general symptoms were as I have described. His pulse was 100, but weak and compressible, his tongue heavily coated; his bowels constipated. He said his head felt somewhat queer, but complained of no headache.

The treatment was simply eliminative and symptomatic. Active catharsis was induced by three (3) C. C. pills, followed by a copious draught of sodium phosphate in hot water. Later in the day he was given a hot bath, followed by an energetic massage for about an hour, and kept in bed all day. He slept well that night, and awoke feeling very much better. His head was clear, although he complained of a "queer feeling" in it. On getting up his movements were somewhat unsteady, but rapidly improved, so that by Sunday, or forty-eight hours after stopping the drug, it seemed to have been completely eliminated, and he was so far recovered as to be able to attend to his business matters and leave for home.

Sulphocarbolate of soda is an excellent drug for intestinal indigestion.

Adrenalin chloride and cocaine have recently been combined for the production of local anesthesia with a minimum amount of hemorrhage.

*POULTICES AND COUNTER-IRRITANTS.**

Hanna Kindborn (*Trained Nurse*, February, 1902) writes as follows on these interesting subjects:

The following poultices are mostly used. Flaxseed or linseed meal, bread, yeast, flour, Indian oat and corn meal, carrot, onion, slippery elm, charcoal, antiseptic, soap, starch, spice, butter, digitalis leaves, etc.

Flaxseed meal poultice is made by stirring the meal into boiling water, allow it to boil until thick enough to cut with a knife, remove from fire, beat well, put between folds of gauze; apply.

Bread poultice is made of old bread or crackers, boiled in water until mushy; drain, beat well, and quickly put between folds of gauze; apply.

Yeast poultice: Take freshly made dough, put in bag large enough to allow the dough to rise; apply while rising.

Flour poultice is made as flaxseed meal poultice, after the flour has been thoroughly mixed in cold water.

Indian oat and corn meal poultices are made as flaxseed meal poultices.

Carrot poultice: Scrape carrots fine, put between single fold of gauze; apply in cases of irritating skin diseases.

Onion poultice: Chop onions very fine, apply as above; used in cases of bronchitis and croup in children. Prevent exposure afterward, as the pores are opened.

Slippery elm poultice: Take slippery elm, steep in boiling water until soft, drain, beat, and apply. Used in skin diseases when elimination is too acid in reaction.

Charcoal poultice:

Charcoal, well powdered....	dr.	4
Bread crumbs.....	oz.	2
Boiling water.....	oz.	10
Flaxseed meal, q. s. to make a thick paste.		

Sprinkle half of charcoal in poultice and half on wound. Used in gangrenous sores.

Antiseptic poultice: Use flaxseed meal and 1 per cent. antiseptic solution in place of water. For gangrenous and otherwise infected wounds.

Soap poultice: Used in preparing surface of skin for surgical operations. Either made with solution of green soap in which gauze is soaked and wrung out from, or green soap paste, thinly spread on gauze.

Starch poultice, made like mucilage of starch, only thicker; applied cold in cases of irritating skin diseases.

Butter poultice: Used in cases of colic in children. Melt butter, soak flannel, and apply hot to abdomen.

Digitalis poultice: Used in retention of urine. Make a flaxseed meal poultice, sprinkle powdered digitalis leaves either over the surface of poultice or stir it in with the same.

Jacket poultice: Make an ordinary double jacket of flannel, open at shoulder, sides and front, fasten with tapes. Slip poultice between. Or quilt gauze and cotton batting, and use a protector in pneumonia cases.

Spice poultices are made with all kinds of spices; put in a bag, soak in brandy, and apply as a counter-irritant.

Counter-Irritants. — Rubefacients, mild irritants: Tinct. of iodine, chloroform, mustard, turpentine, ammonia, tinct. capsicum.

Apply tinct. iodine three times in succession; if covered over will irritate more. In some individuals this drug produces pustular eruptions.

Chloroform can be applied as liniment. As: soap liniment two parts, chloroform one part; rubbed into the skin with the hands; or it can be applied pure, pouring some on a blotting paper and applying to skin. Both ways are beneficial, and when used the parts should be covered over, as it is the vapor accumulated that irritates. When using the blotting paper be careful not to let it blister.

Mustard can be used as paste poultice, paper and leaves.

* Reprinted from *The Cincinnati Lancet-Clinic*, May 17, 1902.

Paste is made as follows:

Mustard..... 1 part
Flour..... ..... 1 to 5 parts
Tepid water, q.s. to make paste.

Or mustard and the white of an egg can be made into a paste. Avoid using vinegar and hot water, as they change the active principle of the mustard. Put paste between folds of gauze, lubricate skin; if cold weather apply first with a hot fomentation; apply paste, cover well over with cotton and bed-clothing, allow to remain until skin becomes red, generally ten to twenty minutes, remove, and powder surface of skin with talcum powder.

Mustard poultice is made by adding one to four drachms powdered mustard to a flaxseed meal poultice.

Mustard paper or plaster is used by first soaking in tepid water, skin lubricated, and paper applied.

Mustard leaves are placed in a muslin bag, dipped in water (tepid), and applied. This form of mustard poultice is used for children.

Turpentine is either used as an emulsion, applied like chloroform liniment, or as a stupe.

Ammonia is used as a liniment, applied like chloroform liniment.

Tinct. of capsicum is very strong and used sometimes to blister; it is very irritating to the skin and can be removed with alcohol, if so desired.

Vesication or blistering is done by applying cantharidal plaster or collodion. The plaster should be applied as follows: Cut a hole in a piece of adhesive plaster as large as you desire the blister, apply to surface made surgically clean and rubbed with turpentine (shave if necessary), put the cantharidal plaster in the opening made and fasten loosely with a bandage. Eight to fifteen hours are required to draw a blister, but the formation of the same can be hastened by application of heat over the plaster.

1. Open the blister thus formed by inserting a sterile needle one-fourth of an inch below and above the blister into the same, thus forming a canal through whic the fluid finds an outlet. Apply steril cotton to absorb discharge and chang *p. r. n.*

2. Open blister by cutting a few open ings in the same; dress as above men tioned.

3. Open blister by removing skin a once, quickly apply sterile cotton to exclude air. Wash with normal salt solution when changing dressing.

When using cantharidal collodion, apply it with a camel-hair brush to the skin.

Drugs that produce pustular eruptions are croton oil (Oleum Tiglii) and tartar of antimony.

They are rubbed into the skin and will in a short time form the pustulae.

Ulcer of the Stomach.—

℞ Chloroformi .....♏ xviij
Bismuthi Subnitratis .....gr. xlv
Aquae.....q. s. ℥ v
M. Sig. Half tablespoonful every hour or two.
—Steff.

Pyloric Stenosis in Infants.—E. W. Saunders (*Archives of Pediatrics*, April, 1902) says: Medicinal and dietetic measures should always be first employed. The indications are as follows: (1) To overcome the violent pyloric contractions, such drugs as belladonna, bromides and chloral opiates should not be given, as they impair the motor function of the stomach. (2) To treat the secondary gastric irritation, the retained food should be washed out and the stomach rested by rectal feeding for one or more days. When food is again given by mouth, the stomach should be washed out occasionally to remove a possible residuum of undigested food. (3) The diet should consist of food which forms no coagulum in the stomach. Whey, peptonized milk or a mixture of these is good. Cod-liver oil will supply fat, and cream may be gradually added. After nursing lay the infant on its right side. Small quantities of food should be given in order to prevent gastric dilatation. These measures failing, resort must be had to surgery.—*Medical News*, June 14, 1902.

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Editorial.

NO CASE OF LABOR can be considered to have been brought to a successful issue without a most careful scrutiny and treatment of the breasts and nipples, previous to and after the birth of the child. In the contribution by Dr. SAMUEL M. BRICKNER on Fissured Nipples, the far-reaching complications and sequelæ of this condition and the great importance of preventive treatment should serve as an impetus for directing more uniform attention to the breasts. His method of prophylaxis is safe, agreeable and efficient, and tends to render the nipples firm, erectile and free from abrasions. In our February number we had occasion to deprecate the use of alcohol because of its likelihood to dehydrate the tissues and so render them more susceptible to cracking. For the fissure itself a twenty per cent. ichthyol solution has been found most efficacious. It is an old observation, however, that a drug, which will prove to be remarkably successful in one case, will often be practically useless in another of the same nature. So in fissured nipples, nitrate of silver in solution or the stick, glycerite of tannin, balsam of Peru, together with various mechanical contrivances may be required in turn. The pain and suffering attendant upon this condition should make us strive, with the writer, to give the parturient woman the best treatment for fissured nipples—prophylaxis.

THE NUMEROUS METHODS and remedies for the treatment of acute gonorrhea evidence the resistance which this infection offers to intervention of all kinds. While some authorities advise and practice an expectant plan, others again institute active measures at the very outset of the attack. In the article by Dr. ABRAHAM L. WOLBARST, who for several years has devoted considerable attention to the different phases of the subject, a critical outline of the modern treatment of acute gonorrhea, embracing hygienic, dietetic, medicinal, and operative measures, will be found in detail. The profession and laity are beginning to learn that this affection is not a simple process, the equivalent, as some put it, of a "cold in the head," and amenable to treatment in a few days, but that it is an infection capable of penetrating the deeper structures of the urethra and allied organs, and even the valves of the heart. In fact, some authors go so far as to assert that, while an initial attack, if treated early and properly, is curable, subsequent infections are not, even though the macroscopical and microscopical appearances may be negative. The doctor calls attention to "the irrigation neurosis or habit" occurring in those patients treated by the Janet method, a condition which has not been mentioned or discussed by writers on the subject. Treatment being so unsatisfactory, our efforts should be directed to prophylaxis by the instillation into the urethra directly after intercourse of a small quantity of strong solutions of nitrate of silver or protargol.

IN POINT OF PAIN there are few affections, perhaps, which can equal acute otitis media. This condition frequently baffles our diagnostic abilities, the spontaneous rupture of the tympanum often pointing the way to the underlying cause of the

symptom complex. In children, more especially, after excluding diseases of all other organs obscure febrile and cerebral symptoms may be explained at times by an examination of the ears. In our abstract of an article on "The Therapeutics of Some Ear Diseases" the course of treatment for the general practitioner is given in compact form and well worth preserving for future use, for it must be admitted that no more grateful patient can be found than one relieved from the pain of an acute earache.

While in former times the use of poultices and counter-irritants was carried to extremes, the pendulum of late has swung to the other end, and the "poultice" and "blister" doctor is the subject of ridicule. In the proper place and at the proper time the cautious application of these agents not only affords relief, but tends to modify or cure the existing conditions. The primary good from poultices of every sort lies in the heat which it furnishes, just as the beneficial effect of the counter-irritant is dependent, in great measure, upon the depletion of the deeper parts. We have abstracted in this number an interesting resumé of the subject by Hanna Kindborn, who gives the various substances used for poultices and counter-irritants, their methods of preparation, and the indications for the use of one or the other.

A more extended experience and observation of the effects of trional and sulphonal have demonstrated that these drugs are not always harmless, but capable at times of producing distinct, alarming and even fatal symptoms of intoxication. The case of trional poisoning reported by Dr. E. P. Mallett is but one of several which have been recorded in this country and abroad within a comparatively short period. Instances of this nature should sound a note of warning to the indiscriminate administration of these valuable hypnotics.

Current Literature.

Nux Vomica.—Nux vomica used specifically becomes an invaluable remedy. Five drops of nux in half a glass of water, a teaspoonful every hour or two. In atonic gastric and intestinal troubles, tongue coated pasty yellow, pale; pale mucous membranes, nausea, vomiting; acute pain in the small intestines; acute pain in the umbilicus, with pale circles around the mouth; general inactivity, indisposition, feebleness. These are the indications for this remedy.—*Toledo Medical and Surgical Reporter*, May, 1902.

Therapeutics of Some Ear Diseases.—L R. McCready (*The Surgical Clinic*, July, 1902) in a very practical article on this subject, makes a plea for reclaiming this class of cases to the general practitioner. He divides otitis media into the catarrhal and suppurative, the former being due to extension by the way of the eustachian tube from the vaso-pharynx; the latter to the invasion of pyogenic micro-organisms. His routine plan of treatment is as follows: The barrels are flushed with full doses of saline laxative, and cardiac sedatives are ordered. One grain of calcium sulphide is given every hour for adults until saturation, then the dose is maintained.

The nasopharynx is cleansed by copious flushings with Dobell's solution, followed with a spray of adrenalin chloride, 1-10,000. By means of an applicator one or two drops of a four per cent. cocaine solution and adrenalin chloride 1-1000 (equal parts) are applied to the orifice of the eustachian tube. Irrigate the external auditory meatus with a hot saline solution and dry it thoroughly. One or two drops of adrenalin chloride or suprarenal extract and chloretone are dropped into the ear, causing blanching of the membrane and relieving the engorgement. Fifteen drops of a mixture of carbolic acid (five minims) and glycerin (55 minims) are applied to the drum by means of an

applicator; the acid acts as an anesthetic and relieves the pain, the glycerin depletes the middle ear and prevents rupture. Paracentesis is justifiable only in absolute cases. The method of operation is described, the instillation of picric acid (1-200) is preferred to nitrate of silver. Daily flushings with creolin (1-500) are advocated. Boric acid insufflation is condemned.

Gruber (*Lehrbuch der Ohrenheilkunde*) advises in suppurative conditions a teaspoonful of a 20 per cent. solution of boric acid in alcohol in one-half pint of hot water as an irrigation. He also states that simple alcohol may be just as serviceable as the above solution, when used in proper strength of the solution. The use of mineral astringents does not produce permanent benefit, indeed the reverse is often the case. The above led me to believe that the most gratifying results are obtained only by drainage, and checking the suppuration by calcium sulphide.

The use of oils, laudanum, etc., is to be condemned. Quinine is contra-indicated in all cases. Nuclein has some advocates but in the writer's hands has proved a dismal failure.

Where the origin has been traced to nasopharyngitis, gratifying results have attended the administration of sodium salicylate in full doses, or kali bichromate gr. 1-67 every hour.

Pilocarpine nitrate gr. 1-67 often greatly aids in the declining stage after suppuration has ceased, in doses of one granule every five minutes until slight sweating, to be repeated every night on retiring.

Ergotine as a Prophylactic and Specific in Childbed Fever.—Solt (*Medical Press*, May 21, 1902,—*Medical Age*, June 25, 1902) says that he always uses ergotine in his practice in preference to the crude ergot, as the latter is so uncertain. The chief property of ergotine is that of exciting contractions of the uterus. Under the influence of the ergotine the flabby, softened, diseased uterus contracts. Its walls become thicker, firmer, and drier. The lymph spaces become smaller. The relaxed blood-vessels also contract. The edematous soaking of the tissues that precedes the entrance of disease germs can no longer take place. Protection is therefore afforded against the entrance and development of such germs. By small doses of ergotine powerful spasmodic contractions of the uterus are never set up, but normal contractions. They begin in the extreme periphery of the uterus, even in the adnexa, and pass to the cavity of the uterus. The contraction hastens the exudation of the lochia and also of necrosed tissues. After the contraction the uterus does not dilate again so much as before. It cannot take up so much fluid as before, since the superfluous moisture has been expelled by the contraction. Given prophylactically, ergotine protects the uterus against infection from without, and from wounds of the vagina, perineum, and rectum. Naturally the temperature falls also when absorption is prevented. The author also gives ergotine in all cases associated with inflammation and suppuration. In infected suppurating wounds, abscesses, abscesses with pyemic or septicemic symptoms, he gives ergotine in place of alcohol. The patients feel better after two or three days, and the appetite returns.

Ergotine has tonic and strengthening properties. The organism disposes of the poisonous materials more readily under its influence, and later on the fewer germs are more easily disposed of by the phagocytes.

The author would therefore give ergotine before all operations, and in all cases of fever with exhaustion. During the past seven years he has treated about 30 cases of puerperal fever with ergotine, giving it all through the illness. All the cases recovered with a rapidity he had never before observed. In all cases when the labor has been normal he gives ergot two or three times a day in powder. After each operation, or when the patient is sus-

pected of intoxication, he orders the following as a prophylactic:

℞ Ergotini..... 50 parts
Aquæ destillatæ..... 50 parts
Tinct. amaræ..... .. 15 parts
M. D. S. Ten to twenty drops 3 times a day.

Or,

℞ Ergotini..... 50 parts
Aq. menth. pip..... 20 parts
M.

Sero-Therapy in Epilepsy.—*The Interstate Medical Journal* of April, 1902, abstracts an article on this subject as follows: Carl Ceni (*The Med. News*, Nos. 10 and 11, 1902) says the object of the paper is to study the pathogenesis of epilepsy for the purpose of adding to the proof of the autotoxic theory of this disease. There is in all probability some toxic irritating cause of a biochemical nature, and elaborated by the organism, which is of capital import in the determination of the epileptic fit. In order to confirm the autotoxic theory of epilepsy, the author injected epileptic serum into hens' eggs. The remarkable increase of the teratogenic power of the blood of epileptics as compared with that of healthy individuals can be explained by no other interpretation. It is even probable that the circulating toxic principles, which have the property of interfering with the normal development of the embryo, are closely connected with those poisons which, acting simply as an irritant upon the formed elements, produce the epileptic phenomena. This theory has been proven by hundreds of experiments. Inasmuch as these results have led the author to believe that the epileptic attacks are the consequence, at least for the most part, of the toxic products circulating in the organism, it was natural to conclude, following the reasoning of modern sero-therapy, that a similar method of treating idiopathic epilepsy might be discovered. The first experiment was as follows: Small doses of epileptic serum were injected into other epileptics for the purpose of finding out if the specific poison would introduce into the organism any property that might be of therapeutic value to other less severe and earlier cases. No result was obtained. The next experiment had for its object the causation of an immunity in the patient against the toxic substance found in his own organism in the experimental studies: one, the injecting of blood serum of one epileptic into a second epileptic less ill than the first; the other, the re-injecting into an epileptic some of the blood serum drawn from himself after bleeding. The author's hypothesis of epilepsy deserves mention, both on account of its importance in this research and because it differs from most of those who hold the autotoxic theory of this disease. It is that the crises are only brought about by a discharge of dynamic energy gathered in epileptogenetic centers in consequence of an irritation which is lasting, constant and uniform for an indeterminate period of time. The therapeutic experiments were carried out as follows: Tubular needles of large bore, fixed in a glass pipette, 10 c.c. long, were used. The tubular needle is inserted into a venous trunk which is compressed above. The free end of the tube empties into an Erlenmyer bottle. Great care is of course paid to cleanliness and antisepsis. The quantity of blood drawn varies with each individual; as much as 250 to 300 c.c. was taken at one time from one patient. The serum is separated and is then divided into portions of 10 c.c. each, and with a little camphor is separately bottled after fractional sterilization. The serum is then ready for use. Both in injecting serum from one epileptic into another and in re-injecting into the same patient, progressive dosage was followed, beginning with 3 to 5 c.c. and increasing up to 10 or 20 c.c. in thirty or forty days. This is necessary from the fact that some patients react violently to the first injections even when made in small doses and present symptoms of an acute intoxication, which may even be dangerous. This is the crisis of adaptation and is quite transitory, disappearing after a few injections. The whole method of treatment is briefly as follows:

During the first month, at intervals of a few days, a total quantity of 40 or 50 c.c. is injected into the glutei. In the following months, when the patient has overcome the first adjusting period, the total dose is carried to 80 to 100 c.c., especially if the patient begins to improve. The injections are continued until the maximum advantages are obtained, and when the patient no longer reacts. Ten epileptics have thus far been treated, and have been under observation for one to two years. All the cases experimented upon were of the severest form of idiopathic epilepsy, both in regard to the number and intensity of motor crises and to the presence of psychic and sensorial phenomena. The therapeutic results are divided into two groups: eight cases with positive and two cases with negative results. The patients of the first group showed marked improvement in weight and in general nutrition. In some of them the improvement gave promise of a definite cure; there was total disappearance of all epileptic manifestations which did not recur after the treatment stopped. The psychic improvement was just as marked. It may be said that, even if the benefits obtained, as regards the general condition and a more or less remarkable diminution of all epileptic manifestations, are only transitory, they are none the less of sufficient duration to commend the treatment to general adaptation. In the two negative cases the treatment stopped after a brief time, because the patients showed a loss of weight and a general increase of epileptic manifestations. Careful clinical histories of all these cases can be found in the article. In conclusion the author states: "These researches demonstrate that in the epileptic blood there are two active principles, which their different and opposite properties show to be of different nature and origin. One of these principles circulates in a free state and is only endowed with toxic properties when injected into the organism of another epileptic. The toxic effect may be immediate and direct and may follow even small doses. The phenomena it determines are transitory in character. The other active principle circulates in the blood of epileptics but only in a latent state. It is endowed with properties which have a stimulating power on the metabolic cells, which are concerned with the elaboration of the epileptogenous toxic agents. These stimulating properties appear only as the remote consequences that take place as the result of repeated injections, over a considerable period of time, with the blood serum of an epileptic into himself or into another epileptic. These stimulating properties can deeply modify nutrition and epileptic manifestations. Upon both they exert a slowly progressive action which may be restoring and therapeutic or weakening and poisonous. In these cases in which the principles have restoring therapeutic properties, there always results a remarkable increase in body-weight and an improvement or total disappearance of disturbances of organic functions or of social life. In cases in which the said principles do not act favorably on metabolism, the serum injections are useless." This essay is earnestly recommended to all those who are interested in epilepsy, both from the standpoint of pathogenesis and therapy.

Acute Rheumatism. — H. L. Staples (*North-Western Lancet*), in a general article on the subject, advises treatment as follows:

External Treatment.—A light wool jacket and soft thin blankets are best for covering. The room should be dry, sunny, and not over-heated, but the temperature should be uniform during the 24 hours. Movements should be restricted as much as possible, and when feasible the warmed bed-pan should be employed. The limb may be fixed on a cardboard or bass-wood splint. Plaster of Paris should be avoided on account of the migratory nature of the disease, and the impossibility of inspection. As an external application I have

discarded hot water, bicarbonate of soda, tincture of opium, poultices, and the much advertised muds. Methyl salicylate applied on cotton or flannel makes a clean, nice dressing, and is beneficial. Eichhorst recommends sodium salicylate, lanoline, and lard, in equal parts, applied three times a day. Oil of wintergreen is also efficient. A cradle is valuable where there is much pain.

The diet consists of milk, milk and Vichy water, and broths. A liquid diet should be enforced as far as possible. Ewart has laid stress upon 15 grains of salt with each pint of water, and I find that it aids. A drink of lemonade to which is added sodium bicarbonate or potassium citrate, 10 to 30 grains, according to age, is helpful, and gratefully taken.

Internal Treatment.—As regards internal treatment we can say with confidence that this is an infectious disease where specific treatment is applicable, not that the salicylic compounds materially shorten the attack or prevent cardiac complications; but they do relieve pain, reduce temperature, and modify the intensity of bacterial activity. The best antirheumatic and antipyretic is salicylate of sodium made from genuine oil of wintergreen. There are two other kinds, the synthetic and that made from synthetic oil of wintergreen. These carbolic acid preparations have the same chemical formula, but the crystallization is different and the effect on the disease vastly inferior. They are more prone to cause nausea and delirium. Calomel may be given at first to assist in eliminating the poison. For an adult 15 to 20 grains of sodium salicylate with an equal part of sodium bicarbonate should be given every two hours for four to six doses, or until there is marked reduction of temperature and relief of pain, and the patient is fully under the influence of the drug. Then the same quantity is given every four to six hours until the temperature is normal. It is an injustice to the drug and the patient to give five to ten grains every six hours at first. We must bear in mind that a varying temperature of 99° to 99½° is an indication that the infection is still active. Later three to five grains, four times a day, should be persisted in for from one to three months or even longer. The suggestion of its administration for one week in each month continuing one year is well worth considering. Salicin is a most valuable remedy, and I frequently resort to it, especially in children.

Opium in the shape of morphine or Dover's powders is sometimes required for sleep. Frequently the salicylates are not well borne. Deafness, tinnitus aurium, delirium, dimness of vision and cardiac depression are the most prominent manifestations. In such cases salicin should be substituted immediately.

THIOSINAMINE.—Thiosinamine is a derivative of oil of mustard and was introduced into therapeutics some nine years ago. The drug exerts some influence over tuberculous skin-tissue. An injection produces in a short time (about two hours) a reactive inflammation of the diseased locality. However, the remedy is far more valuable in the treatment of hypertrophic scar-tissue and keloid-growths.

Dr. F. Juliusberg employed injections of thiosinamine in the various forms of scar-tissue, especially in those resulting from healed lupus. The tense and immobile tissue of the latter soon became soft and movable under this treatment. In one case lupus had transformed the patient's face into a fixed mask, and the mouth shrank to the size of a small opening, scarcely large enough to admit the little finger. Repeated operative attempts were unsuccessful, until a series of injections with thiosinamine had softened the connective tissue to such a degree that a new dilatation of the mouth gave permanent relief.

Similarly good results were obtained in hypertrophic scar-tissue following burns, furuncles, etc. Thiosinamine was also used in cases of scleroderma with striking

success. Several injections would make the hard tissue soft and pliable, thus removing the obstacles to free motion.

In a series of such cases a course of treatment lasting from two to four months resulted in complete cure. Others have corroborated the author's statements in their own practice.

The drug was employed in the form of a 10 per cent. solution (thiosinamine, 10 gm.; glycerin, 20 gm.; distilled water to make 100 gm.). Injections of this mixture are absolutely painless. A syringe holding 15 min. contains 1½ grm. of thiosinamine, and this amount may be given every other day, or daily. The single dose may even be increased to 3 or 5 gm. Should the thiosinamine be precipitated from the solution, the latter must be slightly warmed, and the remedy will redissolve.

Thiosinamine is also prepared in the form of soaps and plaster-mulls. The latter come in strengths of 10 to 20 to 30 per cent., and are quite efficient, though apt to cause a troublesome reaction in sensitive and intolerant skins. The therapeutic action of thiosinamine depends probably on its lymphagogue properties. Of occasional untoward effects, urticaria may be mentioned.

In fresh lupus, in locomotor ataxia, mycosis fungoides, and induration of the corpora cavernosa, the remedy is of no value, says the author, contrary to the statements of others.—*Merck's Archives*, April, 1902.

Therapeutics of Pertussis.—The *Medical World* (February, 1902) mentions the following list of reminders in whooping cough: The pearls of amyl nitrite by inhalation during a paroxysm, tincture of belladonna until the physiological effect is noted, the coaltar products in small and frequently repeated doses, chloral *per os*, and chloroform by inhalation. Bromides in heroic doses, hyoscyamus, monobromate of camphor in full doses. Avoid drugs irritating to the stomach. Spray nares and fauces with peroxide of hydrogen, apply two per cent. solution of resorcin locally. Vaporize tablespoonful of equal parts of carbolic acid and oil of eucalyptol and eight parts of spirit of turpentine in a half pint of water; renew every three hours. In adults weak solutions of cocaine may be used by swab or spray in the nose and throat. The room may be fumigated with a small quantity of formaldehyde. Morphine or codeine may be given by mouth. Thymol is a good internal antiseptic. Ichthyol in peppermint water, taken internally, has been of service.

Picric Acid.—Dr. Louis Maddock states that his experience leads him to regard picric acid as one of the most valuable topical applications known for the treatment of all skin affections in which itching and burning pain are the prominent symptoms, and in all superficial, parasitic, and bacterial diseases of the skin and hair. When used in solutions of one-fifth of 1 per cent. to 5 per cent. there is little or no danger of poisoning through absorption after repeated applications over a wide surface of the body. For burns and scalds of the first and second degree he considers it the best and most reliable remedy we have. In erysipelas it acts as a specific; applications of a hydro-alcoholic solution of from 1 per cent. to 3 per cent. relieve the burning and itching directly, and the spreading of the disease is stopped as if by magic. For chilblains, in 1 per cent. solution, it is also a specific, and is very useful in the treatment of the erythema of poison oak, pruritus ani, moist eczema, seborrhea sicca, cracked nipples, chapped hands, pediculus pubis and chronic ulcer. —*The Southern Clinic*, July, 1902.

Calcium Peroxide.—Emulsions of calcium peroxide in strength of from 2½ to ten per cent. are considered by Sophie Hornstein (*Archives Internationales de Pharmacodynamie et da Therapie*, Vol. 8, p. 428) an excellent antiseptic mouth

wash. The teeth are made whiter, more transparent and softer, without any change in their structure. As a tooth powder, one containing from 20 to 30 per cent. of calcium peroxide is advised. It is an excellent disinfectant for decayed teeth, but being insoluble it lacks penetrating property, so that disinfection is not always complete. The writer has also found that in poisoning with cyanide of potassium this drug may be used as an antidote with a fair measure of success when the dose of cyanide exceeds but slightly the fatal dose. In the gastro-intestinal affections of infancy, more especially in acid dyspepsia, calcium peroxide has given good results.

ACNE VULGARIS.—

℞ Acidi Acetici,
Tinct. Benzoin.
Spir. Camphorae.....āā ♏ 45
Alcoholis.....q. s. ℥ iiiss

M. Sig. Apply on cotton twice daily.

—PHILLOPSON.

DIONIN IN RESPIRATORY DISEASES.—Aug. Sherer (*Centralbl. f. d. ges. Ther.*, 1902, p. 283) states that the action of dionin is, in the main, that of a respiratory sedative in doses of gr. ⅓ to ½ two to four times daily. Often in four or five days the cough disappears entirely. Its advantages over morphine are that the habit is never formed, that the dose need rarely be increased, even after a prolonged use, and that expectoration is neither diminished nor made difficult as is often the case after the use of morphine. Insomnia due to cough is frequently controlled by the ⅓ of a grain, without any ill or disagreeable after-effects. In cases where the drug fails to act, another sedative must be used, because an increase of dose does not carry with it greater efficacy. Headache and dysmenorrhea are often relieved by the administration of dionin.

The syrup of yerba santa is the best vehicle for the administration of quinine to children.

TREATMENT OF ASSOCIATED DISEASES OF THE GALL-BLADDER.—Stephen A. Welch (*Providence Medical Journal*, May, 1902) concludes as follows:

In the ordinary acute cases the relief of the pain is so important that exact diagnosis waits until the hypodermic of morphine has been administered. Locally a laudanum poultice may help to ease the pain. Chloroform water in tablespoonful doses may sometimes be used with advantage, and glycerine in the same dose has been recommended. One of the preparations of valerian in hot water may be tried. It has been noted that when flatus passes the bowels the pain is relieved, and hence an enema preferably of cold water may be added. Between the attacks the best remedies seem to be, first a course of salines taken daily and drank hot, and second, the use of sweet or olive oil. This oil is best administered warm and flavored with anise, peppermint or lemon juice. The dose varies with the patient, but in general a large dose is more likely to give relief. Washing out of the stomach is often of signal value. There is no more interesting question than when to advise an operation and when not. When we consider how often the patient recovers it seems best as a rule not to advise an operation during an acute attack unless the presence of pus seems probable, nor until after a course of salines. Where other diseases are present, such as diabetes mellitus, gout, obesity or organic diseases of other organs, operations are not very successful. There is seldom any such haste as there is in appendicitis, with which cholecystitis is frequently compared, because pus is much less common.

Where colics are frequent, where adhesions are suggested by continued attacks of localized nagging pain, when pus is suggested by the septic fever or by the hyper-leucocytosis, where the patient is becoming a morphine habitué, or where intermittent jaundice suggests a stone lodged in the common duct, in these cases the earlier an operation is done the better.

THERAPEUTIC NOTES.

Atropine is the drug for morphine poisoning after absorption has taken place.

Equal parts of sulphide of barium, calx, and starch make an effective depilatory.

Ichthyol in pill form has been advised for intestinal fermentation.

In applying acetanilid as a dusting powder be on the lookout for poisonous symptoms.

In delirium tremens the hypodermatic injection of apomorphine in doses of $^1/_{40}$ to $^1/_{20}$ of a grain has been found by Douglass to possess remarkable hypnotic properties.

Cannabis Indica is a valuable analgesic in sick headache, dysmennorrhea, and neuralgia.

The first indications in the treatment of a beginning summer diarrhea are to clean the bowels and discontinue milk in any form.

A saturated solution of carbonate of lithia will remove picric acid stains from the hands.

Diuretin is a prompt and efficient diuretic in all forms of dropsy.

One-twelfth of a grain of heroin in tablet form often relieves the short, hacking cough of incipient pulmonary tuberculosis.

In post-scarlatinal nephritis, flushing of the colon with a warm saline solution of physiological strength will increase the excretion of urine to a marked degree.

The local application of a one per cent. solution of picric acid affords great relief in burns, scalds, and dermatitis venenata.

Iodide of potash is best administered in drop doses of a saturated aqueous solution, in milk and after meals.

SELECTED PRESCRIPTIONS.

SEBORRHEA CAPITIS.—

℞ Hydrargyri Chlor. Corrosivi...gr. i
Resorcini,
Chloral. Hydratis.....āā ʒ i
Olei Ricini.....gr. x
Spir. Vini ..... ℥ iv

M. ft. lotio. Sig. Apply once or twice daily.

—BROWN.

PROSTATIC CONGESTION.—

℞ Potassii Iodidi.....gr. v
Ichthyol .....gr. iii
Morphinae Hydrochl.,
Ext. Daturae .....āā gr. ⅙
Ol. Theobromae, q. s.

M. et ft. suppos. No. j.
Sig. One or two daily.

—*Journal American Medical Association.*

BRONCHO-PNEUMONIA.—

℞ Ammon. Iodidi ..... ʒ ss
Strychnin. Sulph.....gr. ¼
Creosoti .....♏ xx
Glycerini ..... ℥ i
Liq. Ammon. Acetatis.....q. s. ℥ iv

M. Sig. ʒ i g. 2 h.

—H. L. SHIVELEY.

ANEMIA IN CHILDREN.—

℞ Tinct. Ferri Chloridi ..... ʒ ii
Acidi Phosphorici diluti ..... ʒ iii
Spir. Limonis..... ʒ i
Syr. simplicis..... ℥ iiss
Aquae..... ℥ vi

M. Sig. ʒ i to ʒ ii after each meal.

—*Medical Times*, May, 1902.

NEURASTHENIA.—

℞ Extr. Sumbul.
Iron Sulph. exsic.....āā gr. i
Asafetida .....gr. ii
Arsenous Acid .....gr. $^1/_{40}$

M. et ft. tal. dos. No. xii.
Sig. One pill t. i. d.

—GOODELL.

PRURITUS.—

℞ Acidi Carbolici ..... ʒ ss
Glycerini..... ʒ ij
Aquae Camphorae .....ad ℥ iv

M. Sig. Apply locally.

—HARTZELL.

DIARRHEA.—

℞ Zinci Sulphocarbolatis..... ℈ ij
Bismuthi Subnitratis ..... ʒ iss
Glycerini ..... ℥ ss
Aquae Cinnamomi.....q. s. ℥ iv

M. Sig. ʒ i g. 2 h.

—C. S. BARNES.

Book Notices.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued monthly, under the general editorial charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VI.—General Medicine—Edited by FRANK BILLINGS, M.S., M.D., Head of Medical Department and Dean of the Faculty of Rush Medical College, Chicago; with the collaboration of S. C. STANTON, M.D. May, 1902. Chicago: The Year-Book Publishers, 40 Dearborn Street.

The advances in general medicine within a relatively short time have been so great that the editor has found it necessary to offer a resumé of this subject in two volumes, the first appearing in October, 1901. The completeness, accuracy, and general method of selection in this volume are of the same degree of excellence which characterized the first number. This edition reviews the progress in diseases of the alimentary canal and allied organs, devoting particular attention to typhoid fever, malaria, yellow fever, dysentery, pancreatic and hepatic diseases, and gastro-intestinal affections. With the editor we are gratified to note the important part which American physicians have taken in the investigations and discoveries of yellow fever, dysentery, cholangitis and pancreatitis. With each succeeding volume it becomes evident that this series will be very comprehensive and that it will cover the advances of all branches of medicine and surgery in a very complete and concise manner.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued monthly, under the general editorial charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. VII.—Materia Medica and Therapeutics, Preventive Medicine, Climatology, Forensic Medicine—Edited by GEORGE F. BUTLER, Ph.G., M.D., HENRY B. FAVILL, A.B., M.D., NORMAN BRIDGE, A.M., M.D., HAROLD N. MOYER, M.D. June, 1902. Chicago: The Year-Book Publishers, 40 Dearborn Street.

Although this volume is intended for ready reference by the general practitioner, it is apparent that, with the exception of the division on materia medica and therapeutics, the subjects have been sifted at the expense of completeness. This must necessarily be so when an attempt is made to cover so many branches in one small volume. Materia medica and therapeutics are covered in a concise manner, the various drugs and measures being given a space commensurate with their practical application and usefulness. Organotherapy, phototherapy, X-ray, serotherapy, electricity and hydrotherapy have received careful attention, as have the most recent advances in the use of gelatin, carbolic acid, creosote, ethyl-chloride, paraffin, yohimbin, etc. Preventive medicine, climatology and forensic medicine, fields in which the general practitioner shows a lamentable lack of knowledge, have not received the attention which their importance deserves. Under preventive medicine, tuberculosis is given the greatest amount of space, and very properly so; the question of venereal prophylaxis is given second importance. Climatology has been very fairly condensed, but the range of the subject as presented is too limited. Medico-legal medicine is dismissed altogether too briefly. All in all, while recognizing the difficulty of condensing so many subjects into a small space, this volume cannot be considered the equal of its predecessors.

UROTROPIN.—Prof. Clifford Allbutt, Cambridge, Eng., emphasizes that Urotropin should always be used in typhoid to disinfect the genito-urinary passages, and that no patient should be discharged until his urine is free from bacilli. To prematurely dismiss typhoid convalescents, constitutes a grave danger.—*British Medical Journal*, July 13, 1901.

The American Therapist.

A MONTHLY RECORD OF MODERN THERAPEUTICS,

WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

VOL. XI. NEW YORK, SEPTEMBER, 1902. No. 3.

Original Articles.

IRITIS: THE THERAPEUTIC MEASURES INDICATED.

By L. R. McCREADY, M. D., Grand Rapids, Mich.

The Iris (a rainbow), so named for its variety of colors in different individuals, is a perforated curtain suspended in the aqueous humor, forming a septum between the posterior and anterior chambers of the eye. Somewhat toward the nasal side and from the centre, it is pierced by a circular opening (pupil), its inner circumference forming the pupilary margin. Its periphery is connected to the ciliary ligaments, being continuous with the ciliary muscle and choroid coats. The anterior muscular layer of the iris consists of radiating muscular fibres, converging from the circumference towards the centre (dilator fibres). The circular or posterior muscular fibres surround the pupil like a sphincter (contractor), which contract the pupil. The ligamentum pectinatum iridis is the suspensory ligament of the iris, connecting its ciliary margin with the corneo-sclerotic junction. Fontana's spaces are spaces between the prolongations forming the ligamentum pectinatum. The arteries are derived from the long and anterior ciliary. The veins empty into those of the ciliary processes and anterior ciliary veins. The nerves are derived from the third, fifth, and sympathetic through the long and short ciliary nerves, the third supplying the circular fibres, the sympathetic the radiating ones, and the fifth are the nerves of sensation. Histologically considered, the iris consists of five layers. Anterior endothelium, anterior boundary layer, vascular layer, posterior boundary layer and pigment layer. The nerves lose their medullary sheath and are distributed to circular and radiating muscular fibres.

The iris, on account of its highly vascular structure, is rapidly affected by different pathological changes, particularly those of an inflammatory nature (iritis). This condition may be the result of exposure to cold, traumatism, syphilis, gout, rheumatism and septic processes.

The cardinal symptoms are dimness of vision, pain, photophobia, and peri-corneal congestion. The congestion of the iridic vessels may precede iritis, or accompany some inflammation of the adjacent tissues, the contraction and discoloration of the pupil making its recognition easy.

Von Michel (*Münch. Med. Woch.*) analyzed 84 cases of iritis, and states that women are more often affected than men. The conclusion is that iritis is almost always a part of some general affection.

In plastic iritis the patient complains of intense pain radiating over forehead and face, which increases at night; the subjective symptoms, photophobia, dimness of vision, may be slight. The objective symptoms, peri-corneal injection, change in lustre of the iris, hazy pupil, and a contracted or distorted pupil, are evident.

The duration of an attack is varied, some cases terminating in a few days; but the majority, when uncomplicated, extend over a considerable period. Relapses are common; circular adhesions may form, destroying communication between the anterior and posterior chambers. When the iritis is of the recurrent form, an iridectomy often prevents a return of the disease, or lessens the liability to attacks.

Serous iritis: The chief objective sign in addition to those of the plastic forms are the deposits in the aqueous and on the back of the cornea, and the increase in the depth of the anterior chamber. Serious iritis is more commonly found in young anemic persons, as the result of general dyscrasias, and is generally bi-lateral.

Suppurative iritis is a condition in which the inflammation is the result of a purulent process, the tissues of the iris becoming involved, and the process extending to the anterior chamber, forming a *hypopyon.*

Undoubtedly, the most effective remedy at our disposal, as a local therapeutic agent, is atropine; the instillation of two or three drops of a four-grain to the ounce solution generally causes dilatation of the pupil and relieves pain. The writer has successfully treated many cases of iritis in its various forms with a routine treatment as follows:

The pupil is dilated with atropine; should it resist the action of this mydriatic, a few drops of a 4 per cent. solution of cocain are dropped into the eye, which generally hastens the mydriatic action of the atropine solution. Adrenalin chloride solution is then dropped into the eye, one drop of a 1 to 1000 solution being used every five minutes until total blanching of the congested area results. The patient is placed on intestinal antiseptics, as experience has proved that many cases of iritis are the result of, or are complicated by, intestinal toxemia. For the first 24 hours the eye is to receive hourly applications of adrenalin chloride $^1/_{1000}$ in drop-doses. Hot water compresses are to be used continually. Bryonia alba to full physiological limit and full doses of gelsemium are administered. Pain is successfully combated by administering dionin (ethyl-morphine hydrochlorate), which the writer considers the best ocular lymphagogue at our disposal, the dose generally being $^1/_{12}$ gr., to be administered in tablet triturate. It is seldom necessary to exceed 1 grain a day. This remedy produces neither constipation, nausea, nor lassitude.

Counter-irritants to the temples and back of the neck afford relief. The patient is kept in semi-darkness, the eye to be protected with a shield, but under no circumstances are bandages to be applied. The pupil is kept dilated by frequent applications of atropine or other mydriatics, which will be mentioned later.

Following the subsidence of the acute condition, the patient reports daily for two or three weeks, in order that the mydriatic may be used. It is seldom safe to allow the pupil to resume its normal position before the lapse of this length of time.

In traumatic iritis ice compresses give favorable results during the early stages, but not in the latter periods, nor in any other form of iritis are they permissible.

In serous iritis great caution must be observed in the use of atropine, owing to its tendency to increase tension.

Should the vitreous become opaque, the administration of pilocarpine is indicated

In rheumatic iritis, the sheet-anchor is full doses of salicylic acid. Should there be a marked idiosyncrasy to the drug, gratifying results will follow the use of potassium bitartrate (cream of tartar) in doses of a few grains in a full glass of water, three or four times a day. When there is any functional inactivity of the kidneys it should be remedied, and the use of pilocarpine gr. ⅓ every three hours will be found of benefit.

The nasal mucous membrane should be examined and any diseased condition given attention, especially if of specific origin.

In true syphilitic iritis mercury must be pushed to the point of tolerance. The proto-iodide gives excellent results, or inunctions may be practiced.

Where the incandescent electric current is available a happy method of supplying either moist or dry heat is obtained by covering the eye with a compress and applying the electric light bulb over it; the proper degree of heat may be obtained

by increasing or decreasing the thickness of the compress.

The author advocates the use of a strong solution of boric acid on all compresses, not for its physiological effects, but as a prophylactic measure. Other agents, as a weak bi-chloride solution, or any of the non-irritating germicides, may be used, which will successfully prevent the ingress of foreign matters, dust particles laden with germs, etc.

It is an excellent practice to administer hypophosphites, iron tonics, etc., in declining stages. The examination for the refraction of the eye should always follow any successfully terminated iritis, and a proper correction, if one is indicated, should be given.

Many times the pain of iritis will not be relieved by instillation of cocain; this being the case, very pleasing results will follow the local use of dionin applied as a powder, or in the form of an aqueous solution (5 per cent. strength). Dionin has marked vaso-dilatory properties and produces chemosis, sometimes extending to the lids.

Homatropine is of little value in iritis, as its mydriatic power is limited.

Mydrin and euphthalmine are two new mydriatics that bid fair to find a place in ophthalmic therapeutics.

Mydrin, in a 10 per cent. watery solution, dilates the pupil in a few minutes, the action continuing six or eight hours.

The action of euphthalmine (5 per cent. solution) is somewhat slower and its action continues for several hours.

Some stress may be laid upon the fact that glaucoma is not uncommonly taken for iritis, causing disaster. As the local effect of glaucoma is intra-ocular pressure, and occurring more frequently in persons over 45 years of age, the use of atropine is fraught with danger to the aged. In these cases mydrin will be found the ideal agent, especially valuable in diagnosis.

In conjunction with iritis we occasionally find a well-marked keratitis varying in its form: this condition calls for active measures from the start. Very gratifying results will follow the use of iodosyl, as a local application to the ulcers.

Airol is often of benefit in corneal ulcers and hypopyon, a 10 per cent. ointment being used.

The Heurtreloup artificial leech will give satisfactory results when leeches are unobtainable, and will give great relief from pain and ocular congestion by its application to the temple of the side affected.

When the iritis is of the recurrent form and an iridectomy is indicated, the procedure is as follows: The conjunctival sac is irrigated with a solution of protargol or bi-chloride, the nasal cavities with a Dobell's or Seiler's solution to remove all debris from that breeding ground and prevent extension of naso-pharyngitis, etc., to the eye via the nasal duct.

Adrenal chloride $^1/_{1000}$ is now dropped into the eye; as soon as blanching takes place, the local anesthetic, either a 4 per cent. solution of cocain, chloretone, or acoin (1 per cent. solution), should be dropped into the eye. As soon as the anesthetic effect becomes manifested, the eye speculum is introduced, and a fold of the conjunctiva opposite the place where incision is to be made is seized by the fixation forceps; with a narrow Graefe knife the incision is made at sclero-corneal junction at the limbus in the upper corneal semicircle, involving about two-fifths of the whole circumference, or less, as the case may require. The handle of the knife is depressed and a counter-puncture made, and the blade pushed up by a to and fro motion, cutting its way out. The iris forceps are entered through the wound, closed and entered in the anterior chamber to seize the iris. The iris is then drawn out of the wound, and by means of the iridectomy scissors as much as is desired is excised. Great care should be observed that no jagged edges result, and that the scissors are held parallel to the wound.

The stump of the iris should now be re-

placed in the anterior chamber by means of the repositor, or still better, by stroking the cornea with the handle of a knife or a rubber eye-spoon. Bandages are next applied and the patient instructed to rest.

Hermain (*Münch. Med. Woch.*) advocates modified open treatment by means of a shield or hollow bandage that allows the eye to remain open and does not interfere with the movement of the lid. He claims that by this method there is less irritation, less congestion of vessels, and allows a free discharge of the conjunctival secretion. This, apparently, is reasonable, but the writer would suggest the liability of traumatic astigmatism, which is likely to occur, as there is a natural inclination to *attempt* binocular vision in spite of the fact that one eye is covered. The following table may be of some assistance, particularly to those not familiar with the different manifestations of the eye diseases, and will serve as an excellent guide for differential diseases.

	CONJUNCTIVITIS.	IRITIS.	GLAUCOMA.
Discharge.	Muco-purulent or purulent. Adhesion of lids.	Watery. No adhesion.	No hypersecretion.
Pain.	Not severe, mostly confined to globe; sense of sand in the eyes.	Neuralgic; worse at night, paroxysmal.	Same as iritis, but more severe; not worse at night.
Vision.	Little change.	Dimmed often and early.	Suddenly and greatly diminished.
Photophobia.	Not much.	Slight.	Slight.
Pupil.	Normal.	Small, sluggish, fixed.	Dilated, greenish color, sluggish.
Disease effects.	Both eyes.	One or one at a time.	Both, though 2d may not be for years.
Atropine.	Does not effect.	Soothes.	Aggravates.
Eserine.	Does not effect.	Aggravates.	Mitigates.

On the Treatment of Incipient Broncho-Pneumonia in Infants.—Dr. T. Zaugger (*Lancet*, June, 1902), states that at the very first onset of pneumonic symptoms (high temperature, diminished resonance, small non-crepitant rôles, apathy, increased rates of heart-beat and respiration) he gives a bath at 86° F. for two minutes, and then slowly reduces the temperature of the bath by adding cold water for two to three minutes, until a temperature of 76° F. is reached. The body of the patient is rubbed with a sponge or cloth or with the hand, to promote reaction of the skin and reduction of body-heat. The bath water need not, and in case of feeble children should not, quite cover the body, but the water can be sponged upon the chest, the patient lying in the arms of an attendant. If definite pneumonic symptoms are present, the bath may have to be repeated at intervals of eight to twenty-four hours. If bronchitic symptoms are present, they can be relieved by cold wet cross-packs. The results of the tepid bath do not merely rest on the reduction of body-heat; it is not merely palliative, but curative. The capillaries of the skin are filled with blood, thus temporarily relieving the congestion of internal organs; the action of the heart as well as that of the important nerve centres is stimulated by reflex action, defecation is promoted, and especially diuresis, thus causing the elimination of toxic substances.—*N. Y. Medical Journal*, July 9, 1902.

ATOXYL (*META-ARSENITE OF ANILID: A NEW PREPARATION OF ARSENIC AND ITS APPLICATION IN DERMATO-THERAPY.**

By Dr. WALTHER SCHILD.
(From Professor Lassar's Clinic in Berlin).

While the tendency of the hour to vaunt ewly-discovered medicaments as substi-utes for old and tried remedies, to which hey are often markedly inferior, is not to e sanctioned, we should always hail with oy the introduction of any new substance vhich combines great potency with slight apacity for harm. If such a remedy can e substituted for one of equal power, but npleasant collateral action, the gain is ertain. In the realm of the therapy of rsenical preparations the need of such a emedy has always been felt, and there-ore I would like to report the experiments f Prof. Lassar and myself with meta-rsenite of anilid, a new product.

It is necessary for a correct judgment of hese researches that I should recapitulate *a toto* what has hitherto been done in the rsenical treatment of skin diseases, these reparations always having been used ex-ensively in this department of practice. ince Cahen, at the beginning of the 19th entury (*Archiv. gener. G.*, Ser. II, 1803), rst founded the rational exhibition of rsenious acid, and Wilson and Cazenave troduced the use of the latter into der-atotherapy, this substance has been used ternally up to the present day in the ost extensive fashion. This use of ar-enic, however,—even aside from the de-terious action of the drug upon the ali-entary canal—was eventually found to e far inferior to the hypodermic method: such an extent that 30 injections may ure a lichen ruber which would require a ousand Asiatic pills at least, and per-aps even twice or thrice as many. The ypodermic treatment means, therefore, vast saving of time. The credit for its introduction belongs to Lipp, who published his researches in 1869. This author injected weak solutions of arsenious acid (0.015 to ¼ gr. every day) for psoriasis and chronic eczema. He found that after a period of 40 days, the eruptions disappeared, at first from the head, neck and breast,—although some residual spots always persisted. Collateral phenomena were also in evidence, such as irritation at the point of injection, vertigo, headache, thirst and tickling in the larynx. Koebner then took up the method, substituting arsenite of potash (0.25 to 4 min. Fowler's solution in each injection) and obtaining astonishing results in sarcoma of the skin and in the hitherto hardly curable lichen ruber. In 1893 Lassar demonstrated his cures of cancroid before the Berlin Medical Society.

In order to free the subcutaneous exhibition of arsenic from its irritating quality, which militates so strongly against the continued use of the remedy (inflammatory infiltrates, abscesses and gangrene having resulted), Ziemssen, in 1896, experimented with arseniate of soda, making one or two daily injections of such strength that the patient received 0.02 (⅓ gr.) arsenic acid daily. This method did away with the production of local irritation, but transitory weakness and nervous excitability were produced.

In 1897, Danlos, a Frenchman, likewise seeking to do away with the production of local irritation, introduced into practice the two substances cacodylic acid and cacodylate of soda, injecting one centigram daily with good results. Cacodylic acid is an organic combination of arsenic which contains a large percentage of the latter, but has little toxicity. This last-named quality is admitted on all sides, but its efficacy is not so generally recognized. The chief objection to its long continued use, however, is the unpleasant taste and smell of garlic to which it gives rise.

An entirely new direction was given to arsenic-therapy in 1897 by Herxheimer,

* Translation from the *Berliner Klin. Wochenhrift*, 1902, No. 13.—Paper read before the Berlin edical Society, March 5th, 1902.

who injected arsenious acid directly into the veins for psoriasis. The dosage was 0.001 to 0.015 ($^1/_{50}$ to $^1/_4$ gr.), and the average duration of the treatment 48 days. The purpose of this author was to raise the efficacy of the arsenious acid and at the same time exclude its harmful effects. His method is regarded as unjustifiable by many, in particular by Jarisch, Hallopeau and Welander. Goldschmidt has defended the method.

The latest essay in the field of the hypodermic use of arsenic is that of Steiner (*Deutsche Medicinal-Zeitung*, 1901), who employed the natural arsenical Levico water and obtained encouraging results without noticeable irritation.

It is evident from this short chronological review that every method of exhibiting arsenic has its partisans and opponents, and that none has yet given general satisfaction. The reason is obvious, for each new preparation or method, while doing away with some of the disadvantages of its predecessors, introduces others peculiar to itself. In other words, a preparation of arsenic which is well borne and efficacious has not as yet been discovered. From this point of view we have set to work to find the desired substance.

Meta-arsenite of anilid, or atoxyl, as it has been named, is a combination expressed chemically by $C_6H_6NO_2AS = C_6H_5NHAsO_2$. It contains 37.69 per cent. arsenic, or about half as much as arsenious acid (As_2O_3). It is a white, odorless powder, which has a slightly salty taste, and is soluble in warm water up to 20 per cent. When the solution cools about 2 per cent. is crystallized out, the crystals being water-white. Upon long standing, aqueous solutions take on a faint yellow hue, without any evidence of decomposition. The same change occurs upon boiling Atoxyl is a very permanent substance, which does not give typical arsenic reactions and forms well characterized salts. When we received some of this substance from the factory, it had only been tested upon animals, having been found forty times less toxic to rabbits than its proportion of arsenic would lead one to expect. It was twenty times less toxic than a like quantity of arsenious acid, which contains twice as much arsenic. It was therefore to be expected that a correspondingly larger quantity of arsenic could be administered to human beings in comparison with arsenious acid, and our first step was to seek to verify this supposition. Next we had to determine the practicability of the remedy, and finally to ascertain whether the increased dose of arsenic ingested corresponded to greater therapeutic efficacy—or in other words, whether diminished toxicity involved a reduction in medicinal value.

At first we used atoxyl inwardly upon several patients. Even small doses caused disturbances of appetite, so that we exhibited the remedy thenceforth only hypodermically. At first we injected half a syringe of a 1 per cent. solution (equal to 0.005 or $^1/_{12}$ gr.), increasing the quantity gradually. The maximum dose consisted of two entire syringefuls of a 20 per cent. solution (equal to 0.4 or 6 grs.). With these high doses unpleasant collateral phenomena always developed, while in many cases this consequence was reached by less than maximum amounts. The fact that initial doses were often well borne while the continued exhibition of the remedy produced ill results showed convincingly that atoxyl has a cumulative action.

The collateral phenomena noted consisted of chills—which usually supervened in the evening—vertigo, headache, and irritation of the larynx. When the use of the remedy was discontinued, these symptoms vanished in from one to two days. Albuminuria never supervened. One case of idiosyncrasy was noted in a robust man, the collateral effects appearing at the outset and increasing with every injection. Valvular disease of the heart constitutes a pronounced contra-indication, for here even small doses cause palpitation and dyspnea.

After experience with a number of pa-ients, we were able to formulate a sys-em of dosing which has stood us in good tead. We confined ourselves wholly to he 20 per cent. solution (which, by the vay, must be warmed to insure complete olubility). The remedy was injected in uch manner that the first syringe con-ained 0.04 (¾ gr.), which amount was so ncreased that the fifth injection repre-ented 0.2 (3 grs.). In other words, if a yringeful represents 0.2 of atoxyl, the irst injection was one-fifth of the whole, he second two-fifths, etc. The dose of .2 (3 grs.) was not exceeded during the ntire treatment. At the outset the injec-ions were given with one-day intermis-ions; later the interval was two days. f collateral effects supervened—which vas seldom—the treatment was suspend-d for two or three days. As in all arseni-al treatment, the patients often experi-nced a sense of weakness, which is to e regarded as insignificant and as likely o disappear with the continued use of the emedy. As the treatment progresses, a onic influence may even be noted. This vas particularly marked in the case of a atient with lichen ruber, who also had Basedow's disease. Her very anemic ondition improved notably, her menses ecame more regular and the exophthal-nos smaller, while her color and weight vere also benefited. Atoxyl might there-ore well be tested in Basedow's disease.

In regard to the technic of injections, he greatest pains must be taken to pre-ent the irritative phenomena which have lways been observed in arsenical ther-py. Both the solution and syringe hould be sterilized by boiling, and the atient's gluteal region disinfected with oap, alcohol, ether, and sublimate. The eedle should be introduced perpendicu-arly into the muscles. If all goes well nd phenomena of pain or irritation do ot supervene, we may gradually become ess strict with the technic. The steriliza-on of the syringe and solution need not e uniformly practiced, the soap may be omitted, while the ether and alcohol may also be discontinued in turns. No pre-cautions need be taken which are not ob-served while making an ordinary hypo-dermic injection of morphin (wiping the skin and syringe with carbolic-acid wa-ter). While the injections should still be intra-muscular in part, they may also be made subcutaneously into the intra-scapu-lar region, upper arm, etc. Finally, intra-venous injections may be tried. All these methods are practicable and not neces-sarily attended with pain. Thus far we have treated 75 patients, making more than 1,500 injections; and we have never seen any notable irritation or infiltration, let alone abscesses.

Our researches have shown positively that ten times as much arsenic may be conveyed into the organism if atoxyl is substituted for arsenious acid. The for-mer, which contains half as much arsenic as the latter, may be given in 20 times the dose. Again, the hypodermic exhibi-tion of atoxyl is highly convenient for the practitioner, well borne and harmless from the standpoint of the patient—a fact which cannot be overestimated in im-portance when we bear in mind the dis-advantages of all the older arsenical preparations.

We now come to the third proposition, to the question to which our researches have been addressed, viz.: that of the therapeutic activity of atoxyl. One must not expect that a tenfold quantity of arsenic in the organism means a tenfold more speedy cure than could be obtained by exhibiting arsenious acid. Were such the case, lichen ruber might be cured by atoxyl in from 6 to 9 days. No such claim is made for the new preparation.

If we ask ourselves why the large quantities of arsenic which may be ad-ministered in the form of atoxyl are non-toxic, the explanation will doubtless be that the element is bound to the fixed anilid nucleus, and splits off very slowly within the tissues, producing at the same time its pharmaco-dynamic effect. If

this view is correct, the phenomenon of the cumulative action of the arsenic becomes readily understood when the drug is given over long periods in progressively increasing doses. To solve this question with certainty the elimination of arsenic by the urine would need to be studied exhaustively. Such investigations are already under way. Thus far it has been ascertained that 0.2 gm. (3 grs.) of atoxyl injected into the body begins to appear in the urine on the second day and that elimination is not complete until the seventh day.

Further we should consider the fact that such obstinate affections as the chronic dermatoses do not justify us in saturating the body with arsenic in the effort to produce an immediate cure, but that a certain interval of time is necessary for the action of the drug upon the pathological process. We should not expect from atoxyl any essential shortening of the period of treatment. The large amount of arsenic which may be thrown into the body with atoxyl does, however, enable us to use the injections sparingly, say every third or fourth day. The total number of injections necessary to produce a cure within a given time should therefore be relatively small, and this feature constitutes another praiseworthy quality of atoxyl. This point has not been fully tested as yet in practice, but as far as we have gone its truth is manifest.

The 75 cases treated by us cannot be described here in detail and we shall deal chiefly with generalities, illustrated by instructive examples. Our material has comprised thus far cases of chronic skin diseases, such as alopecia areata, dermatitis herpetiformis Duhring, sarcomatosis, dermatitis exfoliativa chronica, xanthoma multiplex diabeticum, psoriasis and lichen ruber. In the majority of these cases atoxyl was not used to the exclusion of other remedies, the usual external applications being added. Nevertheless the opportunities for judging of the merits of the atoxyl were satisfactory, and we were able to arrive at a proper system of dosage and to become convinced of the absence of irritating properties on the part of the new remedy. Again the speediness with which the various affections yielded to the treatment could be justly attributed to the action of atoxyl itself. For example, 20 cases of psoriasis treated with atoxyl combined with local treatment recovered upon an average in 29 days, and 10 cases of lichen ruber in 24 days. Such results could hardly have been attainable without the co-operation of the atoxyl. Alopecia areata and dermatitis exfoliativa were in no wise influenced by the treatment, but in a case of Duhring's disease the patient recovered in a markedly short time. A case of sarcomatosis of the skin has been under treatment but a short time.

This small material is, of course, only suggestive and not convincing, for we must turn for scientific accuracy to cases in which atoxyl alone was used. These are 18 in number, viz: xanthoma diabeticum one, psoriasis three, and lichen ruber fourteen.

In the case of xanthoma diabeticum, improvement was noted after the fourth injection, the tubercles having become more shallow, while the yellow hue of the apices disappeared. The red areola next began to recede, and after 22 injections recovery was complete.

As for psoriasis, improvement was noted in each of the 3 cases after 5 or 6 injections. The lesions became paler and the infiltration less marked, while less scale production was noticeable. As treatment progressed the infiltration disappeared entirely, even when excessive. Complete and permanent disappearance of all the lesions was not obtained in either of the cases. Recovery from psoriasis under arsenical treatment can be expected in certain circumscribed forms only. Lipp's cases all exhibited residual lesions which could not be made to disappear. Neisser could see no permanence in the results obtained, and recovery was only relative in cases treated by Herxheimer's method

(intravenous injection). We cannot, therefore, expect that atoxyl is superior to the older remedies in this respect, for it owes its virtues to arsenic alone. Hence, in the atoxyl treatment, we are not justified in renouncing local treatment.

In resumé, such a valuable synergist and accelerator of recovery as atoxyl is to be recommended warmly for psoriasis.

Lichen ruber is far more amenable to cure than psoriasis.

This tormenting and obstinate dermatosis is fortunately eradicable by arsenic, which is a true specific for it. Our 14 cases treated exclusively with atoxyl have all made perfect recoveries, or are rapidly approaching this termination. After 8 or 10 injections the tormenting itching disappeared, and the red papules became more shallow and browner in tint, finally vanishing with persistence of the dark-yellow spots of pigment. The most severe case required but 42 injections and the mildest 17. The average number of injections was 27; average duration of treatment 30 days. None of the cases have shown a tendency to relapse.

Now, better results than the preceding have not been attained with the older arsenical preparations, and atoxyl is in no wise inferior to the latter. Since injections need not be given over twice a week, atoxyl has a decided advantage over its rivals, the number of injections necessary to effect a cure being notably reduced. It is also confidently expected that atoxyl will be found to be more free from all collateral effects than the older arsenic compounds; so that, all in all, its introduction into practice must be regarded as a step forward.

Typhoid Fever.—(From "The Experimental Diagnosis, Sero-therapy and Prophylaxis of Infectious Diseases," by Staff Physician Dr. E. Marx, Vol. XI, p. 51, *Bibliothek von Coler*, 1902): The typhoid bacillus usually makes its exit from the body in the feces, but in rare cases also in the sputum. The latter mode of excretion probably does not in general play a great rôle in effecting the spread of the disease; but just on account of its rarity it is likely to be overlooked, and hence, when it does occur, is a dangerous source of infection to surrounding individuals. Of the very greatest importance, however, being certainly the chief means by which contagion is transmitted, are the bacilli which are in numerous cases excreted with the urine. This fact was discovered by Hueppe and Seitz as long ago as 1886, and has been frequently confirmed; but its epidemilogical importance was first realized only by Petruschky. The latter showed that in one case 1 cubic centimeter (¼ dram) of urine contained more than 170 millions of typhoid bacilli; and he calculated that in that instance the daily excretion of the micro-organisms amounted to 200 milliards of bacilli.

The most stringent disinfection of the stools, the sputum, and above all, the urine, is absolutely necessary in every case of typhoid fever. And since the investigations of Neufeld have shown that in some cases the excretion of typhoid bacilli persists during convalescence and even for weeks after recovery, we are compelled to regard the urine as infectious in all cases until a careful bacteriological examination has demonstrated the absence of the micro-organisms. The premature dismissal of a patient in whom the bacillary excretion has not ceased constitutes a grave danger and may be the cause of a recrudescence of a typhoid epidemic.

Neufeld confirms Richardson's assertion that the employment of urotropin 5 grams (75 grains) in 150 grams (5 ounces) of water, in tablespoonful doses three times a day for three weeks, renders the typhoid urine germ-free. And since Schumberg has shown that the urotropinized urine as such inhibits the development of the typhoid germ, the cessation of bacteriuria can only be accepted as a fact when the bacilli are no longer found after the remedy has been discontinued for a considerable period of time.

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Editorial.

THE LACK OF INTEREST IN THERAPEUTICS.

In the present state of our medical knowledge, no one would venture to detract from the value and importance of accurate diagnosis. True though it be in great measure that "*qui bene diagnoscit bene curat,*" it is equally true that he who institutes the more rational and more potent therapeusis cures more promptly and completely. It must be acknowledged that within recent years therapeutics has not received the attention which the subject merits. Although the action of quinine in malaria, mercury and iodide of potash in syphilis, the salicylates and their allies in rheumatism, and iron in anemia, shows a tendency toward specific medication, and although medical progress is advancing in that direction, we are as yet far from anything like specific medication in its truest sense, that is, the use of a particular agent which will always prove directly antagonistic to and curative of the disease under treatment. In other words, we have not arrived at a stage in which each disease or group of diseases has its particular drug or drugs. For these reasons, the physician who is best armed with therapeutic resources, he who can use the best drug or combination of drugs at the proper time and place, he will be more successful than his confrère with equal diagnostic abilities.

Then again, the best among us are unable at times to arrive at a satisfactory conclusion, until the course of the disease has been followed for several days. What can be more important than a thorough understanding of the proper course to pursue during this non-diagnostic period?

Whether we should follow the symptomatic, physiological, expectant, empirical, or rational methods, is the question which will arise in such cases. The advances in chemistry, pharmacology, and physiology have placed at our disposal an array of drugs, such as should stimulate us to greater action and experimentation. At the meetings of our various medical societies, and in most of our larger medical journals, it is uncommon to note a paper on therapeutics; surgical, medical, bacteriological, medico-social and medico-legal subjects receive, practically, all the attention.

Is it not high time that therapeutics was given more space in current medical literature? Even the members of sections on therapeutics respond very irregulary, if at all, to requests for papers on therapy. Why this lack of interest? Surely the field is a large one for scientific observation. As one of our contributors has written, instead of "expending our efforts to discover a name for a new germ, or a germ for a new name, we should develop the most neglected branch of our honored profession—therapeutics."

It was for the development of this branch of medicine that the AMERICAN THERAPIST was founded ten years ago, and it is for this purpose that its columns are now open, as they have always been, to contributors from all over the country. We esteem it both a privilege and a duty to sound this note of warning against the decline of interest in therapeutics, and

with pleasure we place the pages of our journal at the disposal of writers on therapeutics.

Arsenical Preparations, more so than many others, have been abused in the treatment of dermatological lesions. Arsenic is not a panacea for skin diseases; it is distinctly contra-indicated in acute and subacute skin affections and of value only in the chronic, obdurate, and persistent dermatoses, such as psoriasis, lichen planus, pemphigus, sarcoma cutis, etc. Walker very properly says that "valuable in many diseases, it is positively injurious in others, and its reckless abuse brought about a reaction from which it has not yet recovered." Various preparations and methods of administration have been tried in an attempt to reach a maximum therapeutic effect and a minimum derangement. With this end in view a new preparation, known as atoxyl, has been experimented with by Dr. Schild in Prof. Lassar's clinic, and his results have been translated in full and published in this issue. Discussion as to its superiority over the older drugs and methods must be reserved until a more extended trial of its results has been noted.

With the introduction by Dr. Carl Koller of cocaine for the relief of pain the field of local anesthesia first saw the light of day. How chemistry has furthered interest in this method of application is shown by the great number of local pain-relieving agents now at the disposal of the profession—acoine, antipyrin, chloretone, eucain, nirvanine, orthoform, holocain, anaesthesin, euphthalmin, ethyl chloride, rhigolene and others. Recently, experiments with heroin salts have demonstrated that these, too, have a local anesthetic effect, thus adding another drug to a most valuable series.

In this age of specialism the general practitioner is disinclined to treat any condition which partakes of a special nature. There is no excuse for any physician tampering with lesions with which he is not at all familiar; every progressive practitioner, however, should be competent to treat the commoner affections of special fields, and to know at what stage to refer them, if necessary, to those who, by virtue of wider and longer experience, and by exclusive attention to certain branches, entitle them to the name of specialists. In support of the fact that the general practitioner, the most "all around specialist," is fully capable of directing the treatment, temporarily at any rate, of many special conditions, the paper by Dr. L. R. McCready on iritis and his contributions on other subjects may be put in evidence.

THERAPEUTIC NOTES.

Be cautious in the use of eye lotions containing acetate of lead, where there is any corneal ulceration.

Potassium permanganate is an efficient antidote for morphine, provided it is still in the stomach and before absorption has taken place. Grain for grain it will decompose morphine.

A glass of cold water *sipped* every morning before breakfast tends to relieve chronic constipation.

An eight per cent. solution of nitrate of silver applied twice daily, will cure a beginning fissure of the nipple.

Oedema of the uvula diminishes very rapidly after multiple punctures.

Subacute forms of articular rheumatism sometimes respond to the use of salophen after the usual antirheumatic remedies have failed.

Lubichondrin is very useful for lubricating soft rubber catheters, while albolene answers a similar purpose for sounds.

A one per cent. filtered solution of chlorinated lime is considered by Zeuner the most effective agent for the treatment of ulcus cruris.

In chronic myocarditis and endarteritis the iodides have a very favorable influence.

Cloths wrung out of ice water and applied to a swollen rheumatic joint, will sometimes cause an instantaneous disappearance of the pain.

The application of equal parts of tincture of iodine and glycerine to the lids three times a week, after a preliminary cocainization, is said by Baxter to cure trachoma.

Richards advises five to ten drops of formalin to eight ounces of water as a spray for atrophic rhinitis. Under its use it is said that the crusts diminish and the fœter disappears.

Applications of pure oxygen to the skin have been followed by a luxuriant growth of hair upon the exposed surface.

A ten per cent. solution of chromic acid acts very well when applied to mucous patches of the oral mucous membrane.

For the syncope of hysterical young girls try a teaspoonful of the ammoniated tincture of valerian.

Lotio alba, containing a drachm each of zinc sulphate and potassa sulphurata to six ounces of rose water, is useful in acne vulgaris of the face.

A hot sitz-bath twice daily is a valuable adjunct to other measures in the vulvovaginitis of children.

The pain and discomfort of gonorrheal epididymitis are frequently relieved by the application of a five per cent. guaiacol ointment.

Current Literature.

A New Method of Treating Morphine and Alcoholic Habits. — H. A. Hare (*Medical News*, June 7, 1902) reports cases of morphinism and alcoholism treated by the use of large doses of hyoscine, as first advised and practiced by Dr. Lott, of Cameron, Texas. In the six cases of morphinism and alcoholism treated it was found that the patients took as much as a quarter of a grain hypodermatically for days at a time, without any ill effects; that they suffered slightly, if at all, from the immediate withdrawal of morphine, and that the desire for the drug was largely, if not entirely, dissipated in a few days. In one case mild symptoms of intoxication—dilated pupils, dry tongue, mild wandering delirium—occurred, but no alarming symptoms developed. In none of the patients did disorders of the heart or other organs take place. During the course of treatment, which usually lasts about two weeks, there is usually no difficulty in getting the patients to take liquid food in sufficient quantities both for nourishment and for the purpose of flushing the kidneys. Under this plan of treatment morphine can be withdrawn from morphine-habitués with extraordinary ease.

Oxygen in the Treatment of Pneumonia. —E. W. Mitchell (*The Cincinnati Lancet-Clinic*, June 21, 1902), in speaking of its use, says: I think the best method of administration is by making a funnel about the mouth-tube and holding the funnel over the patient's mouth and nose for ten or fifteen minutes at a time, once or twice in each hour, according to the amount of cyanosis. If the tube be put in his mouth or nose he is apt to make efforts at deep inhalation and exhaust himself. Children resent the tube, and are best treated by using the funnel. When they object and struggle against the application of the funnel over the face, the funnel or tube may be laid beside the face, on the pillow, so that the oxygen mixes with the air. The

faucet is turned so that the gas bubbles slowly through the wash-bottle. Given in this way it may be administered continuously, or until cyanosis and dyspnea are relieved, to be recommenced on their reappearance. The trained nurse or the intelligent mother may be instructed to use the gas when the symptoms call for it. In other cases it is better to direct that the gas be allowed to flow for from ten to twenty minutes in each hour—or in each half hour.

Although a useful addendum, oxygen gas is by no means a substitute for the natural supply of the atmosphere which may be had at all times and all places. A full and free supply of the latter is of more importance than the oxygen tank. If it were possible I would treat all my cases of pneumonia in tents out of doors. As the next best thing, throw open wide the windows and doors.

A Preliminary Note on the "Silver Treatment" of Phthisis by Intravenous Injections of Protargol.—W. Ewart (*The Lancet*, 1902, No. 5) says the use of protargol in phthisis was suggested to him by Mays's successful use of silver nitrate injections in this disease. His results were decidedly better than those of Mays, and at least as good as those obtained by Maguire by means of formaldehyde. There was always a noticeable subjective improvement, which went hand in hand with a decided improvement in appearance and strength. The cough and expectoration diminished and the sputum, losing its characteristic tuberculous appearance, became more and more catarrhal in appearance, and finally consisted merely of transparent mucus. The end result of the treatment was always characterized by a reduction of temperature, although this fall was often interrupted by febrile exacerbations in the course of the treatment.

The technique is as follows: About ℥ iss of normal salt solution, containing gr. iss to gr. iiss of protargol, are injected into a vein, followed by the injection through the same needle of some more salt solution to prevent injury to the tissues. An hour after the injection a chill usually ensues, followed by a rapid rise of the temperature lasting half an hour. After this has disappeared the patient feels permanently better; no long-continued ill after-effects were ever noted. Only in one case was the injection followed by a brief nephritis. In another case, on the other hand, an albuminuria of long standing was markedly ameliorated, while in a third case an obstinate hemoptysis ceased after the first injection. Twelve to fifteen injections usually suffice. They are best given every other day, though in some cases they were given daily.

As soon as the beneficial effects begin to show themselves, other therapeutic measures should be used. Of course the most valuable are general massage, moderate exercise (especially respiratory gymnastics), overfeeding and care of the skin. As a result of this combined treatment, patients who had entered the hospital in a very bad condition could be discharged after a few weeks very much improved and in good condition to begin fresh air treatment. After a short stay in the country, they returned home greatly benefited and with good prospects of a permanent cure.

Quinine in the Local Treatment of Wounds.—*The Southern Clinic* for June, 1902 abstracts from the *Medical Record* the following: Hugo Max calls attention to the antiseptic and styptic properties of quinine and the consequent value of this drug in the local treatment of wounds. In his experimental work the author employed a solution of hydrochlorate of quinine in rectified spirit and distilled water. The growth of non-spore forming micro-organisms is inhibited in such solutions containing 0.1 to 0.2 per cent. of quinine hydrochlorate. Such bacteria are killed in from thirty to sixty minutes by 1 to 1½ per cent. solutions of quinine. Similarly, 1½ to 2 per cent. solutions kill anthrax

spores in twenty-four hours. Hence the antiseptic power of quinine is greater than that of carbolic acid or formaldehyde, but less than that of bichloride. Motile bacteria show marked agglutination when brought in contact with 0.3 to 0.6 per cent. quinine solutions. The styptic power of quinine is due to its marked agglutination of the red blood cells. Such an agglutination is produced by 0.08 per cent. quinine solutions. For practical use 1 per cent. solutions are the most suitable, and they are best used at the body temperature. "Quinine gauze," made similarly to iodoform gauze, is a valuable dressing for wounds. Such dressing, however, should not remain *in situ* longer than twenty-four hours, as they produce a coagulation of the albuminoids and, unless removed, might give rise to a coagulation necrosis. The local use of quinine is especially applicable to fresh wounds.

Progress of Therapeutics During the Past Twelve Months.—Reynold W. Wilcox (*Med. News*, June 7, 1902), in an elaborate review of the subject, mentions among other things: Gautier repeats his encomiums on cacodylic acid (dimethyl arsenic) as a sodium salt, and much has appeared during the past year. In addition to the ordinary uses of arsenic, over which it apparently possesses the advantage of larger doses and, if given hypodermatically, fewer instances of untoward effects, tuberculosis, sarcomatosis, and carcinomatosis have been benefited. Murell's report on sodium cacodylate should make us quite as cautious as we are with other forms of arsenic. On the whole, its use has been gradually increasing and, if the usual precautions are observed, it should be satisfactory. Since all new remedies must pass through the period of criticism, we are of the opinion that this has now gotten upon an established base.

Gelatin is strongly recommended in hemoptysis by Castaing and in hematuria by Schwabe. It is contra-indicated in acute nephritis only. In hemophilia, purpura, and in the hemorrhagic forms of acute nephritis it is probably the best remedy. Subcutaneously about 10 ounces of a 1 per cent. solution are required. Zibell, after noting the various uses of gelatin as a hemostatic, has reached the conclusion that it is the contained lime which causes this phenomenon. In this way he harmonizes the observations upon this substance with those upon such lime salts as calcium chloride. Calcium chloride, by increasing the coagulability of the blood, has been the subject of but few reports, and those are satisfactory. Menorrhagia is the latest addition to the list of indications.

Iodine in sesame oil (10 to 25 per cent. solution), up to six drams by injection into the muscles of the back, seems to be useful in tertiary syphilis, and by the mouth in bronchitis, pleurisy, and various glandular inflammations. As a method of giving intensive doses in syphilis it is to be recommended.

The use of formaldehyde by inhalation seems to be increasing and yields good results. Muther claims to have cured seven of fifteen patients. In this he is seconded by Bierwald. Formaldehyde in glycerin (1 to 4 per cent.) does not cause so much irritation and pain when applied to a mucous surface. In ozena, follicular tonsilitis, diphtheria, the angina of scarlet fever, parasitic stomatitis, and tuberculous ulcers, the results have been such as to warrant further use.

The depressing effects of methylene blue, when administered to patients suffering from nephritis, has led to its trial in various forms of mania and paretic dementia by Hughes and Lovelace, who gave it in twenty-two cases. These were nearly all cases of wild excitement when the drug was used, and in all but six it produced a calmative effect, which did not resemble the action of hypnotic drugs, but seemed rather a natural quietude; the patients were relieved of excitation, but without dullness. The effect was observed three or four hours after a dose had been

given, and lasted from fifteen to twenty-four hours. Generally one grain was given, twice daily or oftener, hypodermatically; in the remainder two grains were given in capsule. In only one instance did depression result. Each patient slept well at night, but not during the day. The only unpleasant symptom which could be ascribed to the drug was the vertigo noted in one patient.

Myocarditis.—D. N. Kinsman (*Columbus Medical Journal*, June, 1902) outlines the following plan of treatment: The indications for treatment are met by rest, no exercise whatever should be taken for two or three hours after a meal. In fatty or fat infiltrated hearts benefit has been derived from graduated exercise. The work to be done is increased daily, and is to be arrested when the heart suffers. Food should be given in concentrated form and small amounts. No soups, sugars or starches should be used; a small amount of toast may be allowed. All kinds of drinks should be limited, and all alcoholics forbidden. In a word, the patient should be hungry most of the time, whose primary trouble was obesity. Electric light baths and massage may be used to break up and get rid of excess of fat. A glass of Apenta water or a dram or two of sodium phosphate in hot water should be used every morning. This keeps down the tendency to fat accumulation. This is the only form of myocardial degeneration in which very decidedly favorable results are to be anticipated. In arterial sclerosis, with or without attendant kidney disease, we derive a temporary benefit from the nitrites, erythrol tetranitrate, nitroglycerine and sodium nitrite. When there is angina pectoris they are most valuable.

The iodides are to be given in all cases. As to cardiac tonics, opinions are not unanimous. Some laud digitalis and place it in the first rank. Others point to the influence upon arterial tone, and use strophanthus, spartein, cactus and other agents of the same class. I have used the strophanthus for a long time and I am not sure that you can expect to accomplish much with it, and the same may be said of the other remedies. When you want the diffusible stimulants, ammonia, ether and hypodermic injections, camphorated oil, are among our best agents. In order to steady the failing heart I know of no agent which equals morphine subcutaneously.

Heroin.—This is a derivative of morphine (Diacetyl-morphine hydrochloride), had in white crystalline powder, incompatible with alkalies, soluble in water, and possessed of the properties, greatly exalted of codeine. Since its introduction in 1899 it has steadily grown in favor, and latterly has assumed a rank as a most valued remedy in the alleviation of the distressing symptoms that obtain to pulmonary maladies. Its beneficent effects are well marked in acute and chronic bronchitis, bronchial asthma, pulmonary emphysema, whooping cough and in inimical respiratory symptoms that often accompany *la grippe*. It is a veritable boon to phthisical and tubercular patients—and here is manifested its greatest field of usefulness—in whom it readily allays cough and dyspnea, stimulating respiration, quieting the nerves and promoting sleep. It soothes without narcotism, and acts as an analgesic without becoming markedly depressant. Dose from 1-25 to 1-5 grain, or hypodermically from 1-75 to 1-25 grain. —*Detroit Medical Journal*, March, 1902.

Atropine and Hyoscine.—These are two drugs of much repute in the treatment of spasmodic disorders of pure nerve origin. The tics about the face, spasmodic torticollis and other localized convulsive seizures at times succumb quickly to one or another of these two drugs. Some cases, however, are more obstinate and will not yield to the usually prescribed dosage and require heroic treatment. I have seen severe cases of chronic torticollis relieved by hourly administra-

tion alternately of atropine sulphate, 1-100 grain, and hyoscine hydro-bromide, 1-200 grain, continued for weeks and even months without producing any of the ill effects so commonly met with. Some of these spasmodic disorders are practically incurable, not even yielding to surgical interference, but before being declared as such, should be subjected to heroic dosage.—W. C. Krauss (*Nashville Journal of Medicine and Surgery*, June, 1902).

THRUSH, SPRUL OR MUGUET.—William J. Robinson (*Merck's Archives*, April, 1902) says:

This is a frequent affection in infants and children up to two years of age, especially those who are bottle-fed. The affection is due to the growth of the fungus odium albicans, which develops best in an acid medium. The salivary secretion of a child suffering with thrush is intensely acid. The best and never-failing combination I have found to be the following:

Sodium Sulphite.....ʒ ii
Or,
Sodium Hyposulphite.....ʒ iss
Glycerin .....ʒ vi
Peppermint water.....℥ ii

Wrap a piece of absorbent cotton around finger, dip in the solution, and swab mouth and tongue thoroughly. To be repeated every half hour or every hour, if used at the beginning of the attack, the thrush generally disappears in twelve hours. The solution should be used freely. No harm can result if the child does swallow some of it. On the contrary, as the odium albicans frequently extends its colonies into the esophagus and stomach, it will prove as useful there as in the mouth. The reason sodium sulphite and hyposulphite are so useful as antizymotics is to be found in the chemical combination and behavior of the salts. In an acid medium they liberate sulphurous acid gas or sulphur dioxide, SO_2, a powerful antiseptic, while sodium hyposulphite also deposits elementary sulphur in a finely subdivided condition. Physicians should be careful to spell out "sulphite," or, in Latin, "sulphis," and not abreviate "sulph.," as the sulphate might be dispensed. A well-known text-book recommends sodium sulphate where sulphite is meant.

Should the physician see the patient late in the disease, when ulcers have formed, the above combination will not prove very efficient. Touching the ulcers with a 10-per-cent. solution of silver nitrate or a 2-per-cent. solution of copper sulphate may become necessary. In many cases of thrush the discharges are extremely acid; the parts about the anus become excoriated and cause the child further suffering. This condition should be treated internally by the administration of a mild alkali and bismuth subnitrate, as in the following combination:

Magnesiae (Calcin).....ʒ ii
Bismuthi Subnitr.....ʒ i
Syr. Rhei Arom.....ʒ iii
Cord. Anisi.....ʒ v

Half to one teaspoonful three to five times a day.

Locally a drying powder should be frequently applied around the anal region.

One having the following composition does good and prompt service:

Zinci Oxidi,
Bismuthi Subnitr., aa.....ʒ ii
Lycopodii .....ʒ iv

Starch is not a good application, as it is apt to form lumps and thus prove irritating.

IODIPIN - PHOSPHOR.—Roberts Bartholow (*Amer. Medicine*, July, 1902, p. 142) says: Iodipin is a combination of iodine and oil of sesame. In commerce it appears in two strengths — ten per cent. and twenty per cent. It represents probably the most easily tolerated form in which iodine can be administered internally. Iodipin - phosphor contains one - fiftieth grain of phosphorus in ten minims of iodipin of twenty-five per cent. strength. It is a dark reddish-brown, oily liquid, having an odor of garlic. It is best administered hypodermically, the dose for an adult being twenty minims.

It has been observed on the Continent that the largest doses of iodipin do not

cause iodism. This is explained by the character of the combination of the iodine and the sesame oil, whereby the former is given out so slowly that systemic effects do not appear. Nor has the writer seen any of the toxic symptoms due to the action of the phosphorus, although he has used as much as one-tenth of a grain repeatedly. Without any pronounced systemic action, iodipin-phosphor promotes in a marked degree the nutrition, increases the body-weight, and removes or modifies the symptoms of various nervous affections not readily amenable to treatment. The cases thus favorably affected were examples of sclerosis, anterior and posterior, neuralgia, neurasthenia, gout, chronic rheumatism, etc. It promises to be a valuable remedy in pulmonary tuberculosis and other wasting diseases. A fuller discussion of its physiologic and clinical aspects is promised in a future paper.—*Inter-State Medical Journal*, August, 1902.

THE COMPOSITION OF DOUCHES.—Dr. Wyatt Wingrave (*Lancet*, May 17, 1902) says that a douche or irrigant may be used for the removal of morbid secretions, accumulations and foreign bodies, for antiseptic purposes or for diagnosis. The solution employed should therefore be, if possible, a solvent of the substance to be removed; it should itself be soluble and should form a clear solution; it should be non-irritating and capable of penetrating the surface tissues; it should be chemically compatible with the most effective antiseptics; and should be both economical and readily available. Most important of all is its power of dissolving the discharge which requires to be removed, for many solutions in common use as douches actually precipitate and harden the substances they are intended to remove. Even water by itself is by no means the most effective irrigant, since of all the organic substances which are likely to require removal albumin is about the only one which it will dissolve. As the outcome of his inquiries Dr. Wingrave gives a series of formulæ. The basis of a majority of them is formed by a solution of from 1½ to 3 drachms of sodium sulphate to 20 fluid ounces of water, that is a solution of from 1 to 2 per cent. This may be used by itself or with additions to each pint of 40 grains of sodium bicarbonate or borax; or, to the weaker solution, 10 grains of chinosol, or 3 fluid drachms of sanitas, or 2 grains of perchloride of mercury, or 2 grains of potassium permanganate may be added. Other useful formulæ are given, among which we would specially draw attention to one containing borax 40 grains, sodium bicarbonate 40 grains, glycerine or carbolic acid 45 drops, water to a pint.—*The Hospital*, June 7, 1902.

GELATIN INJECTIONS IN MELÆNA NEONATORUM.—The *Medical Bulletin* (April, 1902) abstracts the following:

Holtschmidt has tested the efficacy of subcutaneous injections of gelatin for cases of melæna neonatorum. His results justify him in refusing to accept the suggestion that when injected into the intestines the effect is a local one, and therefore the benefit of this form of treatment would depend upon whether the site of the bleeding be sufficiently low down to be reached by the fluid. He treated 5 cases by subcutaneous injections of a 2-per-cent. solution. The solution was sterilized by boiling over a water bath, in a bottle, with a cotton wool-plug, for five to six hours; 15 cubic centimeters (= *circa* 4¼ drachms) of this were injected into the subcutaneous tissue of the thorax or thigh. In 3 cases only two injections were needed; in 1, two were employed, and in the last case three injections had to be given. In all cases the hemorrhage ceased after the injections. The children all made good recovery save the last, which was removed from the hospital before it was quite well, and the subsequent course was unknown. In no case was there any reaction at the sight of injection. Comparing other cases

of this condition with these, he finds that, whereas the usual mortality is 50 per-cent., he is justified in claiming for his 5 recoveries that the gelatine injections had acted in arresting the hemorrhage.—*British Medical Journal.*

ANESTHESIN.—Dr. Lengemann *(Centralblatt f. Chirurgie*, 1902, No. 22*)*, following the discoveries of Van Noorden as to the effect of the internal administration of anesthesin, investigated the local action of the drug. He first found that it produced good local anesthesia, without any irritation, and applied it to wounds at the clinic of Von Mikulicz. His experience applies mainly to painful exuberant granulations and to burns. In the former class of cases a previous sprinkling with anesthesin rendered the application of the silver stick painless. In one case failure resulted owing to faulty technique. The pain of extensive burns was partially overcome. No toxic symptoms appeared.

THYROID EXTRACT IN ECLAMPSIA. — *The Medical News* (August 23, 1902) abstracts the following interesting communication: Many of the symptoms which patients develop under thyroid treatment are probably due to profound circulatory changes produced by the drug, says H. Oliphant Nicholson (*Jour. Obstet. and Gynec. for the Brit. Empire*, July, 1902). It is a well-established fact that the thyroid gland is enlarged in normal pregnancy. In eclamptics the normal enlargement of the gland is said to be absent. It is well known that under the action of iodothyrin the metabolic processes of the body are greatly stimulated, and there is a striking increase of the secretion of urea. In eclampsia and in all conditions of hypo-thyroidism the quantity of urea is greatly diminished. The symptoms of a typical attack of puerperal eclampsia closely resemble those of complete experimental athyroidea. When a pregnant woman, who exhibits eclamptic symptoms, is put to bed, and kept on milk diet, the demands made on her thyroid secretion are greatly lessened, and the process of nitrogenous metabolism is again efficiently carried out. The thyroid gland may under normal conditions participate in controling renal functions by: (1) The iodothyrin may exert some specific action upon the kidney; (2) urea—the final product of nitrogenous metabolism, when efficiently carried out in the presence of an adequate supply of iodothyrin, acts as a powerful diuretic; and (3) the well-known changes produced upon the circulation (vaso-dilation) by iodothyrin, tend to promote and maintain renal activity. It is thus evident that the real significance of the pre-eclamptic is the break-down of the defensive mechanism, the result of some inadequacy of the thyroid and parathyroid glands, whereby the process of nitrogenous metabolism, instead of resulting in the formation of urea, ceases with the production of intermediate substances, which, when absorbed, excite the symptoms of toxemia. A large dose of morphia is a valuable adjunct in thyroid treatment, because it gives the thyroid gland time to recover itself by inhibiting metabolism and removing the arterial spasm.

TREATMENT OF SCARLET FEVER. — GROSZ (*Archiv für Kinderheilk.*, vol. 34, p. 52) gives a review of one hundred and sixty-eight cases of scarlet fever treated in hospital during two years. All patients were kept abed for three weeks. If by that time there was no albumin in the urine, and if no other complications had arisen, the patient was allowed to be up.

No antipyretic measures were taken unless the fever was high; in that case cold packs were used systematically. In severe cases, where the heart's action was not good, stimulants were used—camphor, caffeine, sodio-salicylate and alcohol.

Careful examinations of the throat were made routine procedure. In ninety-three cases of severe necrotic scarlatinal an-

gina the Klebs-Loffler bacillus was found only four times. The clinical picture in these cases was that of diphtheria; under antitoxin they all recovered.

The severe septic scarlatinas were almost uniformly fatal.

For the treatment of scarlatinal angina ice compresses to the neck, sprayings of the throat with three per cent. boric acid or one per cent. chlorate of potash were used. Stronger solutions were not used.

With reference to scarlatinal nephritis, the author is of the opinion that it occurs even in patients confined to bed and on strict milk diet. He regards its occurrence as a direct effect of the infection. For its treatment he uses milk diet, and adds digitalis or diuretine pro re nata. Hot baths are also used.

The treatment of the uremic attacks, in addition to the measures mentioned, was symptomatic.—*Inter-State Medical Journal*, July, 1902.

Chloasma.—One of the best applications for chloasma, whether hepatic ("liver spots") or uterine, is corrosive sublimate, one to four grains to the ounce of almond milk. This solution is simply swabbed on a piece of cotton three or four times a day, and allowed to dry. The applications are then continued less frequently until the desired results have been obtained. At the same time cholagogues in small doses are to be given, and any uterine trouble that may be present is to be attended to. The removal of uterine congestion is alone oftentimes sufficient to bring about a marked improvement in the brown patches if they are of uterine origin.—*Merck's Archives.—Cincinnati Lancet-Clinic*, July 19, 1902.

Menthol in Cough.—*The Monthly Cyclopedia of Practical Medicine*, June, 1902, says: Menthol is a valuable remedy in the symptomatic treatment of cough. It is a non-toxic anesthetic and calms the irritation of the air-passages as well as does morphine. A few crystals of menthol are placed on a spoon and heated over a lamp or stove from five to twenty seconds. In this way a sufficient amount of menthol-vapor is produced for the patient to inhale. A solution of menthol in alcohol, in the strength of from 40 to 50 per-cent. may also be used, from 10 to 20 drops being placed in the hollow of the hand and thus inhaled. In order to remove the mucus which lines the bronchi and sometimes interferes with the action of the menthol, injections of mentholated oil may be given, thus invoking a cough which serves to remove the mucus.—Sänger, in *Therapeutische Monatshefte*, July, 1901.

Acute and Chronic Gastritis.—Boardman Reed (*The Alabama Medical Journal*, June, 1902), outlines the following plan of treatment:

As to gastritis in the acute form, after putting the patient to bed, stopping all food and allowing water in small frequent sips only, no medicines are really required as a rule, except when necessary to open the bowels. Then 1.10 to 1.3 grain doses of calomel every half hour, or hour, till effect, will do more at first than anything else to hasten the subsidence of the nausea and vomiting, except a warm wet compress over the stomach, externally, and small pieces of ice internally. When such an attack persists after the calomel has acted, a mixture of bismuth, 5 to 10 grains, with 1-4 to 1-2 drop doses of carbolic acid flavored with peppermint frequently repeated is very effective.

In chronic atonic gastric catarrh the bismuth and carbolic acid mixture will accomplish generally as much as any remedy administered *per os*, but lavage every day or two with combination of soda and common salt in first wash water (a teaspoonful of each to the quart), followed with a weak solution of alum (dram to the quart), silver nitrate (grains 10 to 15 to the pint), or other antiseptic astringent, can do still more in skilled hands; and the diet is still more important. These solutions for lavage should be followed by washing out with a pint at least of plain warm water, and, in case of a silver salt, with a solution of table salt.

SELECTED PRESCRIPTIONS.

WHOOPING COUGH.—

℞ Hydrargyri Chlor. Corrosivi...gr. iii
Sodii Chloridi .....gr. i
Aquae Destillatae..... Oi

M. Sig. Paint pharynx, tonsils and epiglottis with camel's hair brush three times a day.

—C. CALABRO.

MALARIA.—

℞ Methylene Blue.....
Quininae Sulphatis.....āā gr. ii
Ferri Carbonatis.....gr. i
Acidi Arsenosi.....gr. 1/60

M. et ft. caps. No. j. Sig. One capsule t. i. d.

—M. DUNN.

FURUNCLE OF EXTERNAL AUDITORY MEATUS.

℞ Iodoform .....gr. iv
Menthol ..... gr. ii
Vaseline..... ʒ i

M. Apply twice daily on cotton swabs.

—CONNOL.

ROSACEA.—

℞ Sulphur Sublimat..... ʒ ii
Zinc. oxid..... ʒ ss
Aetheris.....
Alcoholis.....āā ʒ iss
Aquae Rosae..... q. s. ℥ iv

M. Sig. Apply twice a day.

—J. A. SMURL.

CORNEAL ULCERATION.—

℞ Iodoform.....gr. iss
Cocaine Hydrochlor.....gr. i
Petrolatum ..... ʒ iiss

—GALEZOWSKI.

DIARRHEA OF TYPHOID.—

℞ Acidi Carbolici.....
Ext. Opii.....āā gr i
Bismuth Subnitratis.....gr. xviii

M. et ft. pil. No. vj.
Sig. One pill t. i. d.

—*Journal American Medical Association.*

FALLING-OUT OF THE HAIR.—

℞ Formaldehyd (40 %)..... ....♏ iv
Chloral.....gr. xxij
Alcohol..... ℥ iij

M. Sig. Apply.

—*La Medecine Moderne.*

PERNICIOUS MALARIA.—

℞ Quinine Hydrochlorate..... gr. 45
Antipyrine..... ʒ ss
Distilled Water.....♏ 90

M. Sig. Inject 15 min. (containing 7½ grains of quinine).

—MERCK'S ARCHIVES.

ANTI-RHEUMATIC OINTMENT.

℞ Acidi Salicylici ....
Olei Terebint.....
Lanolin .....āā ℥ ss
Adipis..... ..... ℥ ii

M. Sig. Apply in thick layer.

—STERLING.

VAGINITIS.—

℞ Resorcin .... gr. lxxx
Acidi Salicylici .....gr. viii
Beta Naphtholi.....gr. i
Aquae .....q. s ad ℥ viii

M. Sig. Tablespoonful to a quart of warm water and use as a douche.

—*Journal American Medical Association.*

GONORRHEAL EPIDIDYMITIS.—

℞ Ammon. Chloridi.....
Potassii Iodidi.....āā ʒ ii
Alcohol ....
Aq. Destill.....āā ℥ ii

M. Sig. Apply with camel's hair brush four times daily.

—EARL HARLAN.

Book Notices.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS, Comprising Ten Volumes of the Year's Progress in Medicine and Surgery. Issued monthly, under the general editorial charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume V.—Obstetrics—Edited by REUBEN PETERSON, A.B., M. D., Professor of Obstetrics and Gynecology in the University of Michigan, and HENRY F. LEWIS, A.B., M.D., Instructor in Obstetrics and Gynecology in Rush Medical College. April, 1902. Chicago: The Year-Book Publishers, 40 Dearborn Street.

This volume follows out the plan of its predecessors, in offering the digested views of the best contributions on obstetrics during the past year, and keeps up the high standard set by the previous numbers. It is divided into four parts: pregnancy, labor, puerperium and obstetric surgery, and discusses, among other subjects, placenta previa, hyperemesis, eclampsia, extra-uterine pregnancy, dystocia, puerperal infection, diseases of the newborn, and the various methods of operative intervention.

The American Therapist.

A MONTHLY RECORD OF MODERN THERAPEUTICS,

WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

VOL. XI. NEW YORK, OCTOBER 15, 1902. No. 4.

Original Articles.

*GLANDULAR URETHRITIS, AND ITS TREATMENT.**

By FREDERIC BIERHOFF, M.D.,
Corresponding Member of the French Association of Genito-Urinary Surgery; Fellow of the Academy of Medicine, etc

In every case of gonorrhea there is an involvement of the glands and lacunæ of the anterior urethra, to a greater or less extent, the degree of involvement varying from only a slight irritation, or congestion, with hypersecretion of mucus, to a distinct suppuration, either only the tissues at their orifices, or the entire lacuna or gland being involved. Where the process extends over into the posterior urethra, there is, in 90 per cent. of the cases, an involvement of the prostate gland. This extension of the infection to the glands and lacunæ of the anterior urethra is in the nature of a direct spreading along the surface of the mucous membrane, and occurs in the early days of the disease. The extension of the process to the posterior urethra and prostate may also occur in the early stages of a urethritis, entirely irrespective of any treatment, and is a result, I am convinced, in the majority of cases, of *pre-existing congestion* of the posterior urethra.

Where irritants are applied to the urethral canal, either in its anterior or posterior portions, a congestion results, which involves the glandular structures to a greater or less extent.

Where germs other than the gonococcus enter the urethra, they are usually innocuous; where a pre-existing congestion is present, however, they are prone to cause a mild mucous, or muco-purulent discharge, which they may maintain almost indefinitely. In these cases, too, the glandular structures play a prominent part.

The condition, then, may be either gonorrheal or non-gonorrheal, and, if the latter, either of bacterial origin, or the result of chemical or mechanical irritation. It may involve either the anterior alone, or both this and the posterior urethra.

The irritation in urethritis of whatever form is not confined solely to the epithelial layers, but extends, according to the duration and severity of the process, to the sub-epithelial, even to the papillary layers. Especially is this true of gonorrheal urethritis, where it extends deepest of all. As a result, there is an infiltration of the mucous and sub-mucous layers with leucocytes. This, owing to the richer capillary supply of the glands, is most marked about these latter structures, and as a result, a protracted hyperemia of these glands may occur, with the resulting hypersecretion of mucus. Where the gland-structure itself is the seat of a gonorrheal infiltration, there is either a complete destruction of the gland with subsequent scarring, there may be extension of the process to the periglandular tissues, with, at times, peri-urethral abscess formation, or there may result a chronic, low-grade suppuration, extending over years, the discharge being perhaps a trace, still containing gonococci, and subject to exacerbations upon excesses in drink or venery. This infiltration tends, in the milder cases, toward spontaneous resorption in the course of time; in the

* Read before the Harlem Medical Association, October 1st, 1902.

severer cases, or those of longer duration, the tendency is for organization of the infiltrate to occur, with subsequent contraction.

Naturally, if this condition, being of such varying character, is looked upon as presenting the same characteristics under all circumstances, and is treated in a routine manner, the result must necessarily be unsatisfactory. But if the cases are carefully examined, their character and extent determined, the issues placed *squarely* before the patient, and each case treated solely according to its requirements, the result is usually satisfactory, both to the patient and his physician.

Determination of the gonorrheal or non-gonorrheal character of the inflammation by microscopic examination of the discharge is of prime importance, and should, *in every case*, precede any and every attempt at treatment. Following this comes the determination whether the process involves the anterior urethra alone, or this and the posterior. Usually the "two-glass test" suffices, provided that the patient will observe the precaution to pass all but the last few drachms of urine into the glass. If the anterior alone is involved, the first glass will be found to be more or less turbid and containing shreds, the second clear. If both anterior and posterior, the second also will be found more or less turbid. It is a necessary precaution, however, to determine that the turbidity is not due to phosphates, or urates. For this purpose, the ordinary test by boiling and adding acetic acid will usually suffice. In anterior cases of long standing, where the discharge has diminished to a mere trace, the first urine may contain only shreds. In these cases it is necessary to make a microscopic examination of the shreds of gonococci, and at times to apply the provocative tests.

Since, in the acute stage of an anterior gonorrheal urethritis, the treatment is the same whether the glands be involved or not, it is unnecessary—it is even contraindicated—to make any instrumental examination to locate the immediate foci of disease; where, however, the gonorrhea is protracted into the so-called "chronic stage," where a primarily non-gonorrheal urethritis does not quickly respond to the ordinary treatment, or where a post-gonorrheal "gleet" remains, this examination is a necessity. To make it, we may employ the bougie-a-boule and the endoscope. Of these, the former is of service only to locate for us areas of induration, or strictures, and to determine the calibre of the urethra. The examination must be made complete by the use of the electric endoscope. With this it is possible to determine the extent of the induration, and to accurately locate the diseased glands and, where necessary, to apply one's therapeutic measures directly to the diseased points or areas. Where, however, any instruments are employed, proper aseptic and antiseptic precautions must be used; where gonococci are still present, the examination should be preceded and followed by an irrigation of the entire urethral canal with one of the gonococcicide remedies—personally, I prefer Protargol, in ⅛ to ¼ per cent. solution;—where no gonococci are present, 1-20000 solution of bichloride of mercury may be employed.

With the endoscope we find, in these cases, the wall of the urethra, over the affected parts, more or less reddened and indurated, according to the degree of severity of the process. In the more recent cases, where the infiltrate is still soft, we find the color heightened, and that the fine striæ, which are present in the normal urethral wall, have disappeared, the urethral lumen being marked by a few coarser folds, which tend to a lustreless bogginess of appearance. At points over the diseased wall are seen the orifices of the diseased glands and lacunæ, marked by greater reddening and puffiness; they are usually somewhat dilated, with slightly everted or raised margins, surrounded by a zone of reddening, and may be seen to discharge either mucus or pus. In the

latter case, slight pressure, immediately over the diseased gland, will often cause a distinct drop of pus to be exuded, which may be caught up and examined microscopically. Where the process is one of long standing, we find the color of the mucous membrane paler, varying from a rose to a yellowish tint; the infiltrate is of a hard, sub-mucous character, and all the striæ, even the coarser, may be lost; at points, over the affected area, are seen the dilated orifices of the diseased glands, slightly everted, and surrounded, as before, by a reddened, inflammatory zone.

As stated before, in a large proportion of all the cases of gonorrhea, the process extends over into the posterior urethra, usually in a sub-acute form; and in about 90 per cent. of the cases of posterior urethritis the prostate becomes affected. I speak of the involvement of the prostate and Cowper's glands under the heading "glandular urethritis," since, for our purposes, we may consider these glands as occupying somewhat the same relation to the urethra as do the glands of Lité and the lacunæ of Morgagni, and as they are so frequently the starting-point of a re-infection, which may involve the urethra and its glandular structures after an apparent cure of the urethritis. Similarly, also, the glairy, mucous discharge, which appears at the meatus, may, at times, be a manifestation not of a catarrhal urethritis, but of a catarrhal, or endoglandular prostatitis. This involvement may, and usually does, occur within the first week or ten days of the disease, and the usually given clinical symptoms of prostatitis may be entirely wanting, turbidity of the second urine, even, being only very slight. Involvement of Cowper's glands occurs infrequently, and then usually with acute symptoms. Consequently, if we suspect the existence of a posterior urethritis, our first duty is to locate, if possible, the seat of the trouble. To do this, we must make a careful digital examination of the posterior urethra, through the rectal wall. In inflammation of Cowper's glands we feel a small, usually very sensitive tumor, anterior to the prostate gland, to one or the other side of the median line. Usually, in this trouble, there is also evidence of a painful tumor in the perineum. If the prostate gland is involved, we find evidences of this, varying according to the nature and extent of the process. In the acute form, in addition to the clinical symptoms (burning, heavy pain in the perineum, frequent and painful micturition followed by a varying degree of tenesmus, febrile movement, etc.), we feel the prostate enlarged, either unilaterally, or bilaterally, elastic, and exquisitely sensitive. In the sub-acute or chronic form, we find, in the catarrhal or endoglandular type, areas of doughy softening in an otherwise normal gland; in the follicular type, softened areas surrounded by sensitive zones of infiltration, which feel distinctly resistant; in the parenchymatous type, the whole gland, or lobe, is involved, and is enlarged, somewhat hardened, and elastic to the touch. Massage, either for purposes of examination, or treatment, should not be employed in the acute stage of prostatitis, and, whenever employed, should be preceded and followed by irrigation of the entire canal (without the use of a catheter) with some gonococcicide, preferably ⅛ to ¼ per cent. solution of protargol. Whenever employed, massage should be gently applied, as otherwise unpleasant complications quickly result.

The prostatic fluid, having been obtained by massage, must be examined microscopically, to determine its gonorrheal or non-gonorrheal character. We frequently find that a mixed infection occurs; this, however, does not alter the treatment.

The nature and location of the process determined, we are able to treat it rationally. Our first and most important duty is to free the canal of germs, and *to keep it so.* If these be other than the gonococcus, injections, by the patient, three to four times daily, of 8.0 to 10.0 cc. of bi-

chloride of mercury solution (1-20000 to 1-15000), the solution being retained for three to five minutes; and, in addition, daily irrigation of the *entire urethra* (without catheter) by the physician; supplementing the local treatment by the internal administration of urotropin in 0.5 gm. doses, twice to three times daily, will usually quickly free the patient of them. If gonorrhea be present, either as a pure, or a mixed infection, only solutions of the gonococcicide drugs should be used, and of these preferably protargol in ⅛ to ¼ per cent., argentamin in $^1/_{60}$ to $^1/_{30}$ per cent., or argyrol in $^1/_{10}$ to $^1/_5$ solutions, for irrigations, and ¼ to ½ per cent. of the first, $^1/_{30}$ to $^1/_{10}$ per cent. of the second, and ½ to 1 per cent. of the last-mentioned, for injections, by the patient. If the process has been found to involve the prostate, the prostatitis must be the main point of attack. Here gentle massage of the prostate (preceded and followed by irrigation of the entire urethra), repeated daily, if possible, but at least every second day, will usually soon clear up that part of the process; at the same time, the anterior injections, by the patient, keep the anterior urethra free. If there be febrile symptoms, massage must be omitted until the subsidence of these, the irrigations being continued, once or twice daily, with the solutions at body temperature.

In parenchymatous and follicular prostatitis, as also in involvement of Cowper's glands, hot sitz baths, heat (as high a degree as can comfortably be borne by the patient) applied to the perineum, and heat applied to the prostate, either by enemata or means of the Arzberger instrument, are of great service. In the acute cases, also fluid diet and bed-rest must be ordered. As soon as foci of softening appear, *gentle* massage should be begun in the prostatic cases. Should a prostatic abscess develop, which does not, in the early days, discharge through the urethra, then an incision into the prostate, through the perineum, should be made, and the abscess drained. Similarly, also, in abscess of Cowper's glands.

Where, when the anterior urethra only is involved in the gonorrheal process, or after the prostatic involvement has been removed in an antero-posterior gonorrhea, irrigations with the gonococcicide remedies do not, within two or three weeks, free our patient of all germs and reduce the discharge to a mere trace of mucus, or where, after apparent cure, and cessation of treatment, or following the use of alcoholics, gonococcus-bearing discharge re-appears, we may safely assume that, at some part of the anterior urethra, there are still foci of suppuration. It is then necessary to locate these, and in the case of glands, or lacunæ, either to slit them up with the small blade fashioned especially for this purpose, or to inject our solutions directly into the ducts with a syringe bearing a long, fine, round-pointed needle. Or strong solutions of the drugs (5 to 10 per cent.) may be locally applied, to the membrane over and about the points of disease. Should these measures not produce satisfactory results in a reasonable time, then we may resort to systematic, gradual dilatation with Kollmann's anterior dilators, of either the simple form, or the irrigation-dilator. When the simple form is used, its application should always be preceded and followed by irrigations of the entire urethra. With the irrigation-dilator, the membrane is continuously flushed with the solution employed during the course of the dilatation. This procedure should be employed in sessions of from ten to fifteen minutes, once, or at most, twice a week, and the advance should be not more than one number on the scale in each sitting. Usually there is little or no unpleasant reaction, and the disappearance of gonococci, with subsidence of the discharge, is usually gratifyingly rapid. In no case of posterior urethritis, during the persistence of gonococci, should, in my opinion, the posterior dilator be used. Should peri-urethral passages become infected, these

must be slit up through the endoscopic tube; if a peri-urethral abscess develops, it should be incised at the earliest opportunity, and thoroughly flushed with a five per cent. solution of protargol, by means of a fine syringe, injecting from the skin surface toward the urethra. Or, if a communication exists between the urethra and the external surface, the retrograde injections may be combined with urethral irrigation. This should be repeated every day until a cure is effected.

Should the discharge be of non-gonorrheal character, we may proceed with our dilatations with sounds, or the dilators, after removal of the germs present, substituting for the gonococcicide remedies irrigations with solutions of bichloride (1-20000) before, and of nitrate of silver (1-20000 to 1-15000) after the dilatation. In these cases, too, the number of sessions and manner and rapidity of dilatation are the same as in the gonorrheal cases. The patient is, however, instructed to inject with astringents, such as the sulfo-carbolate of zinc (1 per cent. solution), or Ultzmann's injection.

Where, in spite of these measures, the discharge persists, it is necessary, at times, to locate the individual, diseased glands, and to destroy them with electrolysis.

It has recently been proposed to massage the infiltrated areas directly, in anterior urethritis, a sound being passed into the urethra, and the physician's finger gently massaging directly against this. I believe that it promises well.

Aside from the local treatment, attention should be paid to the general health. Sitz-baths, or full baths, followed by friction; exercise in open air, excepting horseback or bicycle riding; nourishing diet, avoidance of highly-spiced articles of food and alcoholics; tonic drugs, such as the iron and phosphorus compounds, are the measures most to be recommended for the protracted or chronic cases. Moral encouragement, by the hope of an ultimate, complete cure, should not be omitted, for these patients are among the most frequent to be afflicted with neurasthenia, at times approaching melancholia even in its gravity. It should be borne in mind, also, in the treatment of these cases that patients exhibiting the lymphatic, or catarrhal tendency, are likely to be troubled for a longer period of time with catarrhal urethritis than those whose resistive recuperative powers are greater.

The question of permitting or interdicting sexual intercourse, in the non-gonorrheal cases, is one which frequently arises, and must be decided according to the requirements of each individual case. As a routine procedure, permission is not to be recommended; certainly not promiscuous intercourse, since the patient's urethral mucous membrane is, for a time, a much more favorable ground for the development of any and all germs, than is the normal urethra. But where permission is given, the patient should protect himself by the use of the condom.

717 Madison Avenue, New York.

*THE ANTISEPTIC TREATMENT OF RECTAL AND GENITAL CHANCROID.**

By Sinclair Tousey, A.M., M.D., New York,
Professor of Surgery and Rectal Surgery in the New York School of Clinical Medicine; Attending Surgeon to St. Bartholomew's Clinic, etc.

For several years past I have used and taught a method of treating chancroid which has proved superior to some of its familiar methods. Its success seems to show that chancroid, though a virulently infected wound, is one which yields readily enough to ordinary surgical disinfection. As compared with the application of nitric acid, this method is practically painless, the ulcer becomes innocuous more quickly and without loss of substance, and heals more promptly, and cases of secondary lymphatic abscess have become almost unknown.

A saturated solution of permanganate of potassium, which is about ten per cent.

* Reprinted from *The N. Y. Medical Journal*, Aug. 9, 1902.

and must be recently made, is freely applied to the ulcer by means of a cotton swab. This does not injure the skin or mucous membrane if it spreads beyond the ulcer, and it is not a caustic. It turns everything black, and after about a minute is washed off and the surface decolorized by peroxide of hydrogen. The full strength of the latter is used for cutaneous surfaces, but it is diluted about three times for mucous surfaces. Then for cutaneous surfaces a dressing is applied which is kept wet with

℞ Alum..... 25 grains
Lead acetate ..... 2 drachms
Water, enough to make 6 fluid ounces
M.

This is the familiar Roosevelt Hospital "acetate of alumina," and is known as Burrow's solution in Europe; it contains a white precipitate and should be shaken. This answers very well for chancroid of the anus and external genitalia, and does not irritate the surfaces of those parts. For intrarectal or intravaginal chancroid, after the application of the permanganate and the peroxide, the surface should be washed off with water or any bland solution, the speculum withdrawn, and a suppository of cocao butter with ten grains of boric acid introduced. Daily applications for four or five days generally remove the virulence of the ulcer and inaugurate the healing process. After this takes place, the permanganate and the peroxide may be discontinued; exposed surfaces are dressed with boric acid ointment, a drachm of boric acid to an ounce of vaseline, spread on gauze; for the vagina and rectum the suppositories had better be continued.

I have employed this antiseptic method of treating chancroid in scores of cases in hospital and private practice, and have come to regard the treatment by caustics as unnecessarily painful and comparatively ineffectual. As an example of the efficacy of these particular antiseptics, I may cite the case of a man who came to my office from a very successful general practitioner who had been applying "black wash" to a chancroid of the size of a twenty-five cent piece on the external surface of the prepuce. The penis was enormously swollen and very painful, and was getting steadily worse; it had been under treatment for ten days. When he came to me it was with the intention of going into a hospital. I told him that would not be necessary and prescribed a wet dressing of "acetate of alumina" and touched the surface with permanganate of potassium and peroxide of hydrogen. This treatment was repeated daily, and on the fifth day my notes say: "Has cleaned up and begun to heal." The pain and swelling disappeared almost immediately.

Briefly, a chancroid is a severely infected wound and requires something more than surgical cleanliness; and first-class antisepsis, such as above described, has been found to give better results than cauterization.

*TREATMENT OF HERPES PROGENITALIS.**

By Noah E. Aronstam, M.D.,
Assistant to Dermatology and Venereal Diseases, Michigan College of Medicine and Surgery, Detroit, Michigan.

The treatment should be directed towards the removal of those causative factors favoring the occurrence of herpes progenitalis. In a great number of cases can an attack of herpes be early subjugated or aborted, if not entirely prevented. Our efforts should, therefore, consist in the detection of the causes instrumental in the production of the subject under consideration and their immediate eradication. We should invariably attempt to barricade all avenues to the future entrance of the foe—so to speak.

Of course, in cases of an hereditary neurotic predisposition, or in the so-called "darthic diathesis," but little if anything can be accomplished in the establishment of a permanent cure, for, notwithstanding our utmost endeavors, the malady will exhibit a marked obstinacy, and in spite

*Reprinted from *The Medical Times*, Aug., 1902.

of all our therapeusis shows persistency and a tendency to recur.

If the malady be due to a depraved condition of the blood, hematonics, notably the compounds of iron, arsenic, and manganese, may be tried.

The amount of carbohydrates should be restricted, as they tend to produce flatulency and besides tax bodily oxygenesis, thus calling into play an increased expenditure of neutral force. Indigestion should be avoided as much as possible and only easily digestible, nutritious and wholesome food be allowed. Pickled articles of food and various condiments must be interdicted, as well as dishes of the crustaceans. In no way shall the patient partake of such substances as are apt to create autotoxemia, by virtue of their decomposition within the primavia and the formation of ptomains and leucomains.

In deranged conditions of the alimentary tract, some of the simple bitters are very valuable and may be profitably combined with some preparation of cascara. Malt liquors and spiritual beverages, as well as tea and coffee, are not well borne in those cases, as they invariably excite the neutral element.

If herpes be due to the cumulative action of some of the metallic salts, their administration should be immediately discontinued and not resumed until all traces of their existence are obliterated.

Senile degeneration requires a tonic course of medication, the judicious use of phosphorus, arsenic, and strychnine.

If herpes is the result of acquired functional neuroses or psychoses, or actual pathologic states of the nervous system, we are oftentimes forced to resort to the exhibition of some of the analgesics, sedatives and nervines, as codein, cannabis indica, hyoscyamus, camphor, valerian, the salts of zinc (pre-eminently the phosphide), and tentatively the bromides.

We often encounter cases of progenital herpes, which are undoubtedly the concomitant of uricacidemia; under these circumstances we must utilize the salts of lithium (preferably the citrate and benzoate), potassium and sodium, in conjunction with colchicum. If the lesions are but an indication of lactic acid diathesis, we must needs direct our attention to the salicylates, iodides, and the pure oil of betula lenta.

Not infrequently do we meet herpes progenitalis in the later period of the secondary stage of syphilis, in individuals who have never been subject to an attack of herpes before, as it will be shown in the appended report of cases.

The writer is not prepared to state at this particular time in what relation these two affections stand to each other. Tuberculosis may likewise induce recurrent attacks of herpes, if reliance be placed upon report of cases in the practice of some French observers. Under those circumstances we will do well to put the patient on specific medication and adopt the usual treatment recommended for tuberculosis.

The treatment for herpes progenitalis originating from local causes depends chiefly upon the particular factor exciting an occurrence. Thus, in cases of herpes consequent to the decomposition of smegma, cleanliness is the main remedy to be relied on. When the prepuce is too elongated or tight, circumcision will obviate the trouble and serve as a valuable prophylactic to future herpetic manifestations. Discharges of any kind emanating from some portion of the genital tract must be checked, before the herpes can eventually be made to yield.

To whatever local condition we may ascribe the existence of progenital herpes, and in whatever manner the dermatosis be brought about constitutionally, the indications for treatment may be summed up as follows:

(1) Remove the cause and treat any systemic disorder acting as an exciting or predisposing factor.

(2) Observe strict cleanliness of the parts involved.

(3) Use protectives to exclude any irritation or infection of the lesions.

(4) If the latter has occurred in spite of our efforts at prevention, treat the resulting ulcer antiseptically with the various agents at our command.

The first of these measures has received ample consideration in a preceding page. The second can be easily secured by daily ablutions with warm water, to which a small amount of boric acid or sodium biborate has been added, after which the area may be dried with a pledget of absorbent cotton and one of the following protective powders or solutions applied:

℞ Bismuthi subnitr.,
Acidi boracici..... āā ʒiij
Aristolis..... ʒii
M. Et fiat pulv.

Or,

℞ Zinc. oxidi.
Bismuthi subnitr..... . āā ʒiii
Pulv. acaciæ.
Europhen..... āā ʒii
M. Et fiat pulv.

Prior to the application of the above formulæ, it is advisable to moisten the regions with a little glycerin, in order that the powder should properly adhere to them.

Chemically pure talcum or the palmitate and stearate of calcium and magnesium, to which 10 per cent. of ichthyol or balsam Peru has been added, will admirably serve the purpose.

In case where the lesions are situated on the glans or prepuce, they should be protected from friction, pressure or irritating secretions by separating these two structures by means of a piece of sterile gauze, containing a slit in the center, through which the glans penis is passed and the prepuce drawn over it. When the vesicles are located in the space between the scrotum and thigh, they should be covered by borated gauze and a loose bandage applied.

Should this, for obvious reasons, be inexpedient or impossible, then the areas may be protected by painting them with flexible collodion, containing any of the above enumerated combinations in solution or suspension. After evaporation of the ether, a pellicle is left behind which sufficiently protects the parts, besides enabling the incorporated remedial agents to exercise their medicinal effects.

Where the lesions have ruptured either through friction or spontaneously and have become infected, we must endeavor to keep them scrupulously clean and free from all accumulating discharges, by washing them with some mild antiseptic solution, as boric acid, lysol, etc.; following this any of the above-mentioned preparations may appropriately be applied. At no time should we attempt to cauterize these ulcers or use any strong antiseptic or irritant, unless they be contaminated by concomitant chancroidal pus, and even then with a great deal of care and circumspection.

Strong applications should be avoided lest the patches assume an angry and eczematous character and the result be worse than the original lesion.

When thus treated, the vesicles soon desiccate and become covered with an insignificant crust, under which epithelial regeneration takes place, which ultimately falls off, exposing a pink area, which soon fades to a color of normal skin.

Resorbin.—Reinhold Ledermann (*Jour. Cutaneous and Genito-Urinary Diseases*, August, 1901) states that resorbin is a fat emulsion consisting of almond oil, wax, and water in combination, with a small quantity of gelatin and lanolin in order to improve its consistency and stability. It can be rubbed into the corneous layer and follicles without forcible massage, a small amount of fat remaining on the surface; it may, therefore, be used especially on the exposed parts, as the face or hands. It allays itching and inflammation. Resorbin produces a softening of the superficial cutaneous layers, and is indicated when permeation of the corneous layer with fat is called for, as, for example, crusting and squamous eczema, pityriasis of the head and face, psoriasis, ichthyosis and impetigo. It may be used as a base for any of the remedies prescribed in dermatology, and is especially recommended for mercurial inunctions.

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Editorial.

GONORRHEA.

Gonorrhea has been, is, and probably always will be, a theme for wide-spread discussion. Even a moderate experience with the affection will suffice to show that there is no one method of treatment, medicinal or otherwise, applicable to every case. As a result of conflicting views, various schools, if we might term them such, have arisen; there are conservatists and extremists in so far as concerns treatment, and optimists and pessimists in their views as to the ultimate result, — a cure. There are those who boldly assert that patients attacked for a second or third time are absolutely incurable, while others with equal emphasis assure us that many complete and lasting cures have been attained—cures so far as human understanding can comprehend. With the kowledge of these facts before us it is gratifying to read the contribution on Glandular Urethritis by Dr. FREDERIC BIERHOFF, who for many years has devoted his attention exclusively to affections of the genito-urinary apparatus.

There was a time when stricture was considered to be the cause of every chronic discharge, but to-day our ideas have fortunately undergone a change. The writer, very properly, directs attention to the most important requisite for successful intervention, that is, a careful determination of the character, extent, and situation of the lesion. Each case is a law unto itself and must receive individual attention; therefore, no routine treatment can prove satisfactory. Warning is given against indiscriminate instrumentation, and its indications for diagnostic and therapeutic purposes are carefully drawn. Few cavities in the human organism are "hidden" in these days of medical progress, and the urethra is no exception to the rule. The use of the endoscope is comparatively simple; it is in the interpretation of the picture as we see it that the great difficulty exists. It is needless to say that a proper and accurate urethroscopic diagnosis can be reached only after continuous application to this branch of examination; how well this has been mastered by the writer can be seen from the fine distinctions which he draws of congestion, infiltration, induration, color, glandular involvement, etc. The endoscope, furthermore, allows of direct medication to the involved parts, a distinct advance in urethral therapy. The frequency of posterior involvent, of the lesions in and treatment of the prostate and Cowper's glands, and the treatment of the anterior urethra by irrigations, sounds, dilators, injection, incision, or electrolysis, are carefully, concisely and conservatively given. No pretence is made to cover the subject in its entirety; as a guide to the general practitioner, the article may be safely recommended as worthy of earnest perusal.

THE REDDENING OF CARBOLIC.

The reddening of carbolic acid when exposed to the prolonged action of light is as well known as the blackening of silver solutions, the green discoloration of apomorphine and the darkening of Günsburg's reagent under similar conditions. This subject has been under discussion by numerous authorities for many years, and, as yet, no satisfactory and conclusive explanation of its occurrence has been

advanced. Pharmacists have ascribed various causes for this change, such as the influence of light, heat, air or nitrate of ammonia vapors in the atmosphere. At this time, when the application of the drug for external and internal use is markedly on the increase, when, thanks to POWELL, the knowledge that alcohol is its antidote, enables us to introduce it into hidden recesses and cavities, the question of greatest importance is whether the medicinal value of the drug is impaired to any extent by this discoloration. Many authorities agree that it is not; in fact, it is said that some of the very best grades of carbolic turn red more quickly than inferior qualities. Prof. MYLIUS states that the reddening is due to the alkali of the glass vessels in which the carbolic is contained, the liberation of the alkali giving rise to an oxidation of the phenol. To remedy this coloration DEMART suggests adding eleven parts of alcohol to eighty-nine parts of melted acid, subjecting the mixture to freezing, and draining off the portion remaining liquid, thus obtaining perfectly white crystals. Even the latter may turn red when exposed to any of the aforementioned conditions.

It is generally conceded that the medicinal quality of the acid is not interfered with by this coloration, and that it is perfectly safe to use any crystallized carbolic which might have turned red on exposure.

THE SYMPTOMATOLOGY of neurasthenia, as classically described by BEARD, has not been improved upon to this day. The etiological factors in its production, however, have been most carefully studied and classified; among these none is a source of more profound nervous prostration than prostatitis and seminal vesiculitis. It behooves physicians, when brought face to face with neurasthenics, to explore the rectum for the purpose of excluding or determining involvement of the afore-mentioned region, because upon its early recognition depends the future success of treatment.

THERAPEUTIC NOTES.

The most useful remedies in epistaxis are adrenalin, suprarenal extract, vinegar, gelatin and peroxide of hydrogen.

Five drops of peroxide of hydrogen instilled into the ear four times daily will soften impacted cerumen.

Silver stains may be removed by a saturated solution of iodide of potassium or by the application of tincture of iodine followed by ammonia water.

Cocainization of the inferior turbinated with a twenty per cent. solution has been advised as a successful treatment for dysmenorrhea.

In the treatment of trifacial neuralgia tincture of gelsemium and aconitine (Duquesnel) deserve consideration.

A combination of bismuth subiodide and eucain B will relieve and heal sensitive ulcerations.

Orthoform lozenges have been recommended for the dysphagia of laryngeal tuberculosis.

Equal parts of boric acid, bismuth and calomel make a good dusting powder.

It is claimed that ichthyol may be deodorized by the addition of one part each of the oil of bergamont and eucalyptus to fifty parts of water.

Suprarenal extract and adrenalin chloride have controlled the hemorrhage of melæna neonatorum.

In spermatorrhea, camphor monobromate will occasionally prevent the emissions.

Umbilical granuloma are best removed by ligature.

A five per cent. watery solution of methylene blue, locally applied, will cure interdigital intertrigo in 48 hours.

Current Literature.

ANGINA PECTORIS.—In *American Medi-ne* (August 23, 1902) Jay Perkins says: ne important thing in treatment is to arch out the cause of the disease and e exciting causes of the attacks, and far as possible remove them. Of ugs, the one which seems to be of the eatest value is potassium iodid, given moderate doses, not more than 10 or grains, three times a day, for a long ne. During the attack, nitroglycerin the best in many cases. Frequently, wever, the only drug that will give re-f is morphin, and sometimes a good al of it is needed. The cause of the in is not known, but it has been com-red to that occurring in other hollow gans, as in renal and biliary colic, and seems to me that the same precautions ould be used in the administration of orphin, for here and there the par-ysms may end suddenly, and then the isonous symptoms due to the morphin ll prevail. Therefore, if the pain is not ntrolled soon by morphin, I would use loroform or ether.

TREATMENT OF INTESTINAL DISEASE OF ILDREN DURING SUMMER MONTHS.—J. B. athis, Jr. (*St. Louis Clinic*, Aug., 1902), ys:

Sometimes, with pleasant surroundings, light purge of oil will be sufficient. I ten use calomel in 1-12 gr. doses every o or three hours as a purge and anti-ptic. If periodicity is shown I use inine mostly by inunction. If feverish, generally prefer aconite in small doses. pain or tenesmus, I give small opiate, ually paregoric, repeat when necessary. collapse, as in cholera infantum, I use ld applications to head, whiskey and ne stimulants until a reaction takes ace, then treat as common diarrhea, th the exception of the stimulants. ese I usually continue until recovery es place. I sometimes use a combin-ion in cholera infantum of zinc sulpho-carbolate 1-20, salol 1-5, bismuth sub-gallate ½, calomel 1-60, and paregoric 3m every fifteen to thirty minutes until effective.

Many other remedies suggest them-selves, which are used as the symptom develops. Give very small quantities of food. Sometimes let them suck a small piece of ice.

STIMULATION.—Dr. Walter M. Brickner, (*International Journal of Surgery*, Aug. 1902), in his series entitled the Surgical Assistant, says:

For bolstering a flagging heart strych-nine or (and) whiskey may be injected hypodermatically, in doses, for adults, of gr. 1-30 and 30 minims, respec-tively, which may be repeated. Digitalis (m. x of the tincture) is very serviceable, as are caffeine (*e. g.* the salicylate of caf-feine and sodium, gr. ii in olive oil), and nitroglycerine. Small doses of morphine (gr. 1-8 to gr. 1-6) possess the double ad-vantage of stimulating and steadying the heart and reducing the quantity of anes-thetic necessary to maintain narcosis. To combat shock during operation the assistant may order the introduction, by means of a piston syringe, beyond the in-ternal sphincter ani, of

Tinct. digitalis	m. xx
Whiskey	℥ i
Salt	ʒ ss—ʒ i
Water	℥ viii—Oi

In the event of collapse, large doses of strychnine (gr. 1-20 to gr. 1-10) and of whiskey are indicated. Ether, ʒ ss, in which may be dissolved a grain of cam-phor, may be injected, for rapid, though transitory effect. Finally, intravenous in-fusion may be required.

HOLOCAIN.—Heinz and Schlosser (*Klinische Monatsblätter für Augenheilkunde*, April, 1897), contribute a very exhaustive study on Holocain, giving the parmaco-logical, chemical and therapeutical prop-erties of the drug. They state that the anesthesia is brought about by paralysis of the sensory nerve-endings, further ac-

tion than anesthesia not being produced, there being no influence upon the width of the pupil, upon the mechanism of accommodation, the corneal epithelium or constriction of the vessels. That it has an energetically inhibitory effect upon the growth of bacteria, while a 1 per cent. solution retards putrefaction and fermentation. One or two drops of a 1 per cent. solution instilled into the eye will produce complete anesthesia in from 40 to 50 seconds. If, after 40 seconds have elapsed, one or two more drops of the same solution are instilled, another interval of 30 seconds will find the cornea completely analgesic lasting at least ten minutes. Operations involving opening of the capsule iridectomy, cauterization of corneal ulcers, the removal of foreign substances, etc., are entirely painless.

Iodoform in Pulmonary Tuberculosis.—The Nashville *Journal of Medicine and Surgery* (August, 1902) abstracts the following:

One of the few drugs of proved value as an aid to hygienic treatment in pulmonary tuberculosis is iodoform. No other iodine compound yet brought forward as a substitute can take its place; and only iodine compounds are to be considered in this connection. Its chief value is in cases presenting signs of infiltration without softening; but even if limited softening be present in one portion of the lung, the drug is of service in combating the extension of infiltration elsewhere. After extensive softening and cavity formation have occurred its use should give way to that of the creosote group of drugs. To be beneficial in the highest degree iodoform should be given in gradually increasing doses over a long period. At first one-half a grain or less may be given thrice daily after meals, and increments of one-fourth or one-half grain be added every week or ten days, until tolerance is well established. In the course of two or three months a daily dose of 9 or 10 grains will have been reached, which may be pushed by somewhat larger increments and a little more rapidly up to a maximum of 15 grains daily. A good way to administer the drug is in capsule, balsam of Peru (3 to 5 grains) making an excellent excipient. If necessary a digestive agent may be added or a dose of essence of pepsin may be given about an hour later. If deemed advisable arsenic iodid may be combined with the iodoform. There is no chemic incompatibility, and therapeutically the drugs are synergists. No one who has learned how to give iodoform and who has had the courage to persist in its use for a year in each of, say, six cases of the type described, is likely thereafter to abandon it in favor of any of the transient fads of the day.—*American Medicine.*

The Local Application of Heroin Hydrochloride.—Albert Rosenberg (*The Laryngoscope*, August, 1902) says that one need not hesitate in applying the drug locally if the quantity used does not exceed the dose prescribed internally. A solution of 1:40 is used and of this 0.2 ccm. may be injected without any risk.

The effect of local application of heroin in the larynx is two-fold: first, cough allaying, and second, analgesic. Heroin owes its recognition as a remedy against irritating and dry coughs to its influence in reducing both the central and peripheral irritability. The effect is naturally manifested by its local application, since it is as readily absorbed by the larynx or trachea as by the stomach. Aside from this there is another factor. We know that in cases of laryngeal tuberculosis, which are generally accompanied by severe attacks of cough, this symptom is not infrequently produced by the larynx, especially the marked granulating ulcerations. The granulations which are floated up and down during inspiration and expiration cause so violent a desire to cough that even a well disciplined patient is unable to suppress it. The assertion frequently made that the cough of patients with laryngeal tuberculosis always origi-

ates in the lungs, is not correct. I have een frequently able to convince myself hat in these cases the troublesome tussal aroxysms can be rapidly removed, or at east considerably diminished in intensity, y anesthetizing the diseased area by neans of such a drug as menthol. Simiar conditions apply to the posterior laryneal wall, which is so frequently the site f tuberculous diseases, and which is the nost sensitive cough locality in the arynx, although not the only one. If, herefore, we are in a position to allay the ough or remove it for a certain time by neans of a local anesthetic or a drug, vhich will at least reduce the sensibility vhich is commonly increased in these ases, we do the patient a great service, specially those lamentable cases of laryneal tuberculosis which are often greatly veakened in consequence of the tussal aroxysms and disturbance of the nightest.

The application of heroin to the mucous nembrane reduces its sensibility, as we ave found by numerous experiments. If ve let a few drops of the solution flow rom a drop bottle upon a cotton pledget nd apply this to the mucous membrane f the nose, pharynx or larynx, in doing vhich often not one-half of the fluid is sed up, we are able, by touching the parts vith a sound before and after the applicaion, to demonstrate a diminution of the ensibility. Hence heroin is also of serice locally in coughs in certain cases enirely apart from its internal effect.

In all patients suffering with laryngeal uberculosis we have often been able to ote a considerable diminution, and even n almost complete cessation of the cough or a number of hours up to twelve or ven the entire night.

Dysmenorrhea.—J. I. Gurney Williams *The Philadelphia Medical Journal*, June 8, 1902) says:

In regard to treatment the patient's genral condition should receive its full share, s I feel confident that I have seen the menstrual suffering, if not cured, at least much lessened by the building up of a generally run-down system.

Should she be anemic, iron, codliver oil and the syrup of hypophosphites seem to act very satisfactorily. Basham's mixture and Blaud's pills are two of the best iron preparations; the latter in 5-grain pills, with gr. 1-10 ext. nux vomica, 3 to 6 daily, is one usually to be relied on.

The salicylates and quinine seem at times to act beneficially, but to what extent I am unable to say, as the relief from pain was as great in those women who had not rheumatic or malarial diathesis as in those who had.

The bowels should be carefully looked after, the salines perhaps acting better, as they seem to relieve the congestion which is present quicker than other laxatives. A good but not elegant formula is the following saline mixture:

℞	Iron sulphate	gr. xii
	Magnesia sulphate	℥ i
	Sulphuric acid	♏ xii
	Infusion gentian..... q.s.ad.	℥ vi

This may be given for months, if necessary, with no deleterious effects, and is not followed by constipation on its withdrawal.

One important part of the treatment is rest; I mean rest in bed, one, two or three days previous to the expected flow, also during this time; this of itself will at times lessen materially the suffering.

Vaginal injections of hot water, 100° to 110° F., used twice daily up to the day previous to the expected flow, and recommended a few days after the flow has ceased, will be found of the greatest benefit; the failure in some cases to procure any relief from hot douches, and this applies to all vaginal injections, no matter what the indication may be, is due to the women not knowing how to use them properly. They should always use a bulb syringe with a nozzle made of horn or some other non-conductor of heat, although a metal-tip may be covered with a piece of India-rubber tubing, and inject at least two to four quarts, with or without medication.

These injections should invariably be taken while lying down; this is awkward for a woman to do herself and one reason why they sit over a basin or commode, and one why many are not benefited by douches. They should always be given by some other than the patient. A fountain syringe does little more than bathe the vagina in a puddle of warm water, especially if the patient is upright, and what we want most is the relief of the congestion in the pelvic vessels, which is procured much more quickly by the impulse of the jet of water from a bulb syringe like the Davidson, which excites the vessels to contraction. At times women will complain of weight and discomfort in the pelvis after these douches; in these cases, by reducing the temperature of the water to about 95° F., they can be well borne.

When there is much congestion present in the pelvis, and whenever we find tenderness, the application of iodine, first removing the mucus by means of forceps dressed with cotton, followed by the introduction of a glycerine tampon, will be of benefit.

These applications should be made twice weekly, so long as marked tenderness exists, as ascertained by the finger.

The bromides will help many cases, used between the periods in small doses and then increased two or three days previous to the flow. I can offer no explanation for it, but these women seem especially prone to bromide acne.

Balsam of Peru in the Treatment of Bronchitis.—Liegeois (*Journal des Practiciens*, Vol. xvi, No. 9, 1902, page 134) believes that the expectorant value of balsam of Peru depends less upon the cinnamic and benzoic acids, which it contains in the proportion of from 8 to 10 parts to 100, than upon a volatile oil, cinnamine, which it contains in the proportion of 50 parts to 100. Its anticatarrhal virtue depends upon a resin which it contains. An Italian practitioner employs the following combination in the treatment of bronchitis with difficult expectoration:

Tar Balsam of Peru	...of each 2 grains
Powdered licorice	5 grains
Powdered iris	2 grains

For one capsule. One to four daily.

Huchard prescribes the following to patients suffering from tuberculosis with difficult expectoration:

Creosote Iodoform Eucalyptol Balsam of Peru	...of each 1 grain

For one capsule. Four daily at meal time.

—*American Medicine*, August 16, 1902.

Facial Erysipelas.—P. S. Root (*Detroit Medical Journal*, March, 1902), in discussing this subject, states: As to the matter of treatment, the agreement is almost universal that it should be along the lines of antisepsis. Locally we may use moist applications of 1 to 500 or 1 to 100 bichloride, 1 to 50 carbolic acid, etc.; to limit the spread of the inflammation, injections of a 3 per cent. solution of carbolic acid along the line of advancement, or painting a line with nitrate of silver solution or tincture of iodine. So far as my observation goes these attempts at limitation are usually fruitless. Personally I have found ichthyol to be more generally beneficial than any other remedy as a local application. I apply it in 10 to 25 per cent. ointment, or what is perhaps more cleanly, a solution of ichthyol in collodion after this formula:

Ichthyolis	ʒii
Aetheris	ʒi
Collodion ad	℥i

This may be applied with a brush twice a day. The eyes should be cleansed with a saturated solution of boric acid. Should a high degree of chemosis develop, the conjunctiva may be divided so as to diminish tension of the cornea. It may even be necessary to divide the external canthus. As to constitutional measures, of prime importance is the administration of nutritious and easily digestible food, such as egg-nog, milk, beef-juice and liquid peptonoids. Medication should be

antiseptic and tonic. Triturate chloride of iron in full doses frequently repeated has stood the test for years. It is perhaps more generally used than any other remedy and possibly deservedly so, for by it we get a more immeniate result than from any other form of iron. Besides this agent we should give quinine, strychnia and salol or sod. salicylate. The indication for one of the latter agents is to procure as far as possible an aseptic condition of the stomach.

Treatment of Lupus by Potassium Permanganate.—Dupuy has collected a large number of observations relative to the treatment of lupus by potassium permanganate (*Thése de Paris*). This method was first suggested by Butte for the treatment of lupus vulgaris and also erythematosus. Butte applied a dressing consisting of a compress saturated with a lukewarm 2 per cent. solution of potassium permanganate for 12 to 15 minutes daily for about a fortnight, after which the treatment was applied in the following manner: A 1 in 50 solution was applied according to the Butte method, while in the case of non-ulcerated lupus a powder was used as giving the best results. The following is the method: The whole surface having been washed either with an ichthyol soap or an emulsion of corrosive sublimate, tincture of benzoin and soap in distilled water, and carefully dried with tampons of absorbent wool, powdered permanganate is spread over the whole of the lupus patch with a spatula. Should the area affected be extensive, only a portion is so treated at a time. A piece of dry absorbent wool is then applied, and the whole left on a quarter of an hour. At the end of this time the wool is removed and the surface washed with boracic lotion and a simple wet dressing applied. Generally a single application of potassium permanganate is sufficient. Usually a small quantity of the powder remains *in situ*, and after a few days it disappears and a red ulcerated surface is left. Three or four days later this latter shows cicatricial changes. Should any of the tubercles still remain, a second application may be made. This method is especially indicated in those cases where the surface is vegetating, or where there are thick prominent cicatrices and scars. Permanganate in solution is more convenient in cases of lupus erythematosus, or when the lupus is slight in amount or showing superficial ulceration. Under such treatment the ulcers cicatrize rapidly, and the tubercles, at first covered by a crust, become free and do not project. Unfortunately, where the disease has affected the whole thickness of the skin, this method is disappointing. The points in favor of this treatment, as carried out by Dupuy and Butte, are that it is painless, it is easy and inexpensive in application. The writer maintains that it is more rapid than scraping, and the resulting cicatrices are softer, flatter, and less likely to contract than those following other methods. One disadvantage is that the tissues are considerably stained. The method is not applicable to the treatment of lupus affecting mucous surfaces.—*British Med. Jour.*—*Indian Med. Record*, May 21, 1902.

Iodide of Potassium and Iodism.—It is customary with some practitioners to administer iodide of potassium in the form of the saturated solution under the mistaken idea that a saturated solution always represents a definite quantity, and that in the case of potassium iodide the proportion of the drug to the solvent stands absolutely as one grain to the drop. The fact is that this method of administering the drug is inexact and should not be followed where a graduated dosage is required. In the first place, while a saturated solution in a medium such as distilled water would no doubt at all times furnish a reasonably stable proportionate quantity, solutions are not always made with distilled water, and therefore the presence of certain earthy salts might reduce the solubility of the iodide creating a solu-

tion considerably short of the standard strength. Again, as is very well known, a drop varies in quantity according to the kind and shape of the surface from which it falls; and thus ten, twenty or thirty drops of a saturated solution of iodide of potash, supposed to represent approximately as many grains, may, indeed, vary from an amount one-fourth plus to one-fourth minus, according to conditions. In the use of potassium iodide an exact dosage, or very nearly exact, is generally required, for the medication may be prolonged, and gradually increased a grain or so at a time. The necessity for accuracy is therefore apparent.

As to iodism this effect can be very decidedly thwarted by commencing the use of iodides with small doses and slowly working up. This is the more desirable method in most cases, rather than to overwhelm the system by heroic quantities at the start.

A few constitutions, however, are so susceptible to the various drugs, the iodides among the number, that toxic effects are quickly observed even under moderate quantities.—*The Clinical Review*, May, 1902.

Acute Lacunar Tonsilitis.—This form of tonsilitis differs from the parenchymatous inflammation in that the inflammation extends deeper, affecting not only the parenchyma of the gland, but having its special seat in the individual crypts, or lacunæ, which become filled with a purulent exudate that soon pushes its way upwards and is visible at the surface of the tonsil. This exudate is of a fibroplastic nature, and contains streptococci or staphylococci. This type of tonsilitis is very contagious, and frequently affects several members of a family.

Its cause in the first instance is, perhaps, exposure to cold, or anything that lowers the general resisting power of the organism. I have several times seen it follow the use of the galvo-cautery in the throat. It is more apt to occur in persons who have had previous attacks of tonsilitis, and whose crypts are never thoroughly cleaned, and in whom any exciting cause seems to start up an attack of inflammation. One or both tonsils may be involved, but there is not so much likelihood of both tonsils being invaded as in simple tonsilitis. The exudate sometimes seems to coalesce, but usually comes from individual lacunæ, and the tonsil appears to be studded with white or grayish points of irregular size.

The clinical symptoms are much the same as in acute tonsilitis, but the course of the disease is apt to be much more prolonged.

Its treatment is much the same, with the addition especially of antiseptic fluids, such as peroxide of hydrogen, which, when freely applied either in the form of a spray or as a gargle, seems to be of great aid in lessening the degree of local inflammation and in hastening recovery if used early. The tincture of chloride of iron and twelve to twenty per cent. solutions of nitrate of silver applied locally, seem to have value in aborting the disease. The following formulæ are also highly recommended:

℞ Morphiæ..... $^{9}/_{16}$ grain
Tr. verat. virid..... 1 dram
Aquæ..... 4 ozs.

Teaspoonful hourly for three hours; then every three hours for twenty-four hours.

℞ Tr. ferri chlor..... 1 dram
Glycerini..... 2 ozs.

One dram every two hours.

The thorough cleansing of the area, or the opening of the crypts under cocaine with the Leland tonsil knife, if they seem to be at all blocked, is also of value in aborting the disease. While the difficulty in swallowing is considerable, and the pain and glandular swelling frequently extreme, there is usually little if any danger; and as a rule the mouth can be opened sufficiently for the application of the necessary remedies. Guaiac and red gum in the form of lozenges, or other simple astringents, are an aid in restoring the tonsil to its normal condition. The following formula makes a cleansing,

stimulating gargle, and will be found useful en exudative tonsilitis as well:

℞ Acid. carbol..... 1 dram
Glycerini..... ... 3 ozs.
Tr. iodi. ..... 4 ozs.
Aquæ..... q.s. 1 pint

—George L. Richards (*International Jour. of Surgery*, July, 1902).

Follicular Conjunctivitis. — Follicular conjunctivitis, according to Drs. Wood and Woodruff, in *Med. Standard*, is a catarrhal conjunctivitis to which has been added an overdevelopment or hypertrophy of the lymph follicles. They recommend as treatment the local application of cold compresses followed by a mild antiseptic lotion similar to the following:

℞ Acidi hydrocyanici dil. gtt. i |06
Acidi boracici..... ʒss 2|
Sodii boratis..... gr. xl 2|66
Aq. destill..... ℥ii 60|

M. Sig.: One or two drops to be instilled into the eye once or twice daily.

In cases of trachoma or chronic granular conjunctivitis the conjunctival sac should be thoroughly cleansed with boracic acid or weak bichloride solution and later some astringent preparation applied, such as the following:

℞ Cupri sulph. vel. acidi tannici. gr. x |66
Vaselini..... ʒi 30|

M. Ft. ung. Sig.: Apply between the lids once or twice daily.

In the early stages, when the granulations are excessive and prominent, massage of the lids with the following is recommended by them:

℞ Hydrarg. oxid. flav..... gr. v |30
Lanolini..... ℥ss 30|
Vaselini..... ℥ss 30|

M. Sig.: To be applied to the lids and thoroughly rubbed in.

—*Journal of the American Medical Association*, June 14, 1902.

Alcohol and Carbolic Acid. — J. B. Eastman (*Medical and Surgical Monitor*, Aug. 15, 1902) says:

Powell regards alcohol as a perfect antidote to carbolic acid. That the alcohol neutralizes the acid as far as the escharotic effect of the latter is concerned, can hardly be doubted. The whitening of the tissues attendant upon coagulation of the superficial cells is almost immediately removed upon application of the alcohol. In just what manner the alcohol restores the cell, the albumen of which has been coagulated, does not appear from the writings of Powell. The writer coagulated egg albumen with pure carbolic acid and found that the addition of absolute alcohol only hardened the coagulum. It is, however, well known that in wounds the alcohol almost immediately restores the whitened tissues to their normal color. Perhaps the condition produced by the carbolic acid is not that of true coagulation necrosis as has been supposed. At any rate, the carbolic acid seems to destroy or materially inhibit the growth of bacteria in the superficial cells of the infected wound, and the alcohol acts as an antidote to the destructive action of carbolic acid upon the tissues themselves. It may have occurred to some that the alcohol acts not simply as an antidote to the acid, but is hardly inferior to the carbolic acid as a destroyer of germs. It has been the practice of the writer to apply gauze pledgets with fifty per cent. alcohol over stitch abscesses and small superficial wounds generally. Such pledgets may be applied fresh several times daily for one or two days, and followed by the application of iodoform or any antiseptic siccative powder. The writer has found this a useful method of dealing with small and superficial suppurating foci.

Shock.—In an article on the shock of intra-abdominal operations Lewis S. McMurtry (*Medical Mirror*, February, 1902) says:

The symptomatic indications for treatment in shock are to facilitate the cerebral circulation by position, using the Trendelenburg position on the operating-table and elevating the foot of the bed after operation. The heart must be strengthened by strychnine administered hypodermically. The administration of saline solution by intravenous infusion and by hypodermoclysis is indicated for reasons already

given. The application of heat to the surface and the conservation of body heat in every possible way are indicated. Atropine is an agent of undoubted value in strengthening the heart. As the respiration is shallow and the blood insufficiently furnished with oxygen, artificial respiration and the administration of oxygen gas are indicated. Diffusible stimulants per enema (brandy or whiskey ʒ ii, warm water ʒ iv) should be administered. In the effort to meet the issues presented, there is a constant temptation to repeat medicines in large doses too frequently.

Sciatica.—Stevens advocates the following plan of treatment:

In the acute stage rest is essential. Hot fomentations or linear blisters may be applied along the course of the nerve. Deep injections of morphine, antipyrin or cocaine may be required to relieve the pain. In rheumatic cases, full doses of the salicylate of sodium are useful. In chronic cases, prolonged rest is desirable. Counter-irritation should be made by frequent small blisters, by the actual cautery, or by acupuncture. Deep injections along the course of the nerve give much relief, and one of the following remedies may be employed: Morphine and atropine, cocaine, antipyrin or plain water. Electricity sometimes does good. Internally, iodine of potash in small doses is useful; in syphilitic cases it should be given in large doses. The following combination is efficient:

℞ Tinct. aconite root ..... ʒ ij
Tinct. belladonna ..... ʒ ij
Tinct. cimicifuga ..... ʒ ij
M. Sig.: Twelve drops every four hours.

—*Med. Summary.—Southern Clinic*, Aug., 1902.

Rhus Poisoning.—Z. E. Lewis (*N. Y. Medical Journal*, Aug. 23, 1902) writes as follows:

I treat rhus poisoning with ichthyol. If the poisoning shows itself in discrete spots of moderate size, I usually apply with a camel's hair brush a fifty per cent. aqueous solution of ichthyol, making as black a stain as possible, and getting it quite dry before exposing it to the friction of the clothes. In some localities I cover with absorbent cotton and a bandage. Every spot, with a liberal surrounding area, must be stained. This application is repeated at twenty-four hours' intervals till all evidence of disease is removed, which is frequently accomplished by one thorough painting—especially in cases seen early—and very seldom are more than three stainings required. It is very important that every spot shall be stained.

Where, for any reason, the above described method is contra-indicated, I use an ointment. The combination suggested by Slevin (Ichthyol and lead iodide, of each 45 grains; ammonium chloride, 10 grains; and petrolatum, enough to make 1 ounce. The substitution of glycerin, rose ointment, or cacao butter does not alter its efficiency) is excellent; the proportion of ichthyol may be varied—I think, advantageously increased—and the odor should be covered. "Probably the greatest drawback to the use of ichthyol is its strong odor and the fact that it stains the linen brown. The odor can be largely overcome by the use of aromatic essences or fragrant essential oils, and the stains are not permanent, but can be removed by boiling in soap and water." Stains of the skin disappear under gentle washing in warm soap water—at worst after several washings. It is well to bear in mind that the skin has just escaped (or recovered from) a severe inflammation, and to exercise patience with the stain rather than a bath brush.

The twenty-four-hour interval, which I have generally found satisfactory when using the solution, may at times with advantage be diminished, especially when an ointment is used. Sometimes the ointment should be merely spread over the surface, but ordinarily a gentle friction should be employed, and the application repeated in whole or in part, as often as any revival of irritation calls for relief. Thoroughness and fidelity in carrying out the treatment are essential to the highest success.

Book Notices.

THE DISEASES OF INFANCY AND CHILDHOOD. Designed for the Use of Students and Practitioners of Medicine. By HENRY KOPLIK, M.D., Attending Physician to Mt. Sinai Hospital; formerly Attending Physician to the Good Samaritan Dispensary, N. Y.; Ex-President of the American Pediatric Society; Member of the Association of American Physicians, and of the New York Academy of Medicine. Illustrated with 169 engravings and 30 plates in color and monochrome. Lea Brothers & Co., New York and Philadelphia, 1902.

One need not proceed very far in the course of this work, to observe that an enormous amount of information on the diseases of infancy and childhood has been placed at his disposal. Furthermore, he soon realizes that in the short, compact and terse style the author has aimed at clearness and precision, in preference to a more lengthy and perhaps more euphonious diction. In reviewing a volume by one who, for the greater part of his professional career, has devoted his attention exclusively to pediatrics, whose name is intimately associated with some of the most important and far-reaching advances in its various branches, it is but natural that great merit should be anticipated; and let it be said at the outset that our expectations are realized. Throughout the book we see a striking example of presenting the various subjects in a space commensurate with their importance. It is free from padding of any kind; the only fault, if one would call it such, is the large number of facts condensed within a small space.

The first and second chapters are devoted to general considerations, methods of examination, therapy, infant feeding and diseases of the newborn. Infant feeding in all its phases is discussed very concisely and compactly, and abounds in "points" of great practical utility; one wonders how much has been said on this subject in so very few pages. The illustrations in these parts are most instructive, the one on hæmatoma of the sternocleido muscle, with its consequent torticollis, being especially commendable. The chapter on the exanthemata is a model of its kind and embraces the field in its entirety. The true relation of membranous angina to scarlet fever is forcibly expressed, while the discussion on German measles and measles contains the views of the author as expressed in his various monographs. The plate showing the pathognomic measle spots is admirable. It is noted with pleasure, that attention is called to the occasional occurrence of nephritis and joint affections in varicella. Then follow chapters on vaccination, typhoid, malaria, influenza and glandular fever; it is shown that the Widal reaction is a greater diagnostic aid in children than in adults, owing to the presence of splenic enlargement from so many causes in the former. Meningitis — cerebro-spinal, posterior-basic and tuberculous—is discussed with the usual precision. Illustrations of opisthotonos, facial paralysis, and Babinski's relief are lifelike; though mentioned on several occasions, we miss a description of Kernig's symptom, beyond the statement that "the sign has the same characteristics as in the adult." The remarks on tuberculous meningitis should be studied by every general practitioner. Epidemic parotitis, too often dismissed with a few words, is presented with useful illustrations and important details of its differential diagnosis, course and complications. The treatment of pertussis shows the results of large personal observation. In our opinion the discussion of diphtheria is one of the leaders of this work and the equal of any in the various textbooks. It embodies not only the views and experience of the author, but also the most recent and advanced knowledge of the subject. The plate illustrative of tonsillar and faucial involvement is ideal; in fact, from observing the case itself, no more typical picture could be impressed upon one's mind. The term

scrofulosis is retained, three forms — tuberculous, pyogenic, and mixed—being mentioned. Tuberculosis is covered in all its branches, while acquired, late, and hereditary syphilis leave nothing to be desired. Diseases of the mouth, pharynx and larynx are thoroughly illustrated; the author's experience with retropharyngeal abscess is exceptionally large. In the chapter on the gastro-enteric tract we note among others an up-to-date and complete account of hypertrophic pyloric stenosis. Gastro-enteritis, cholera infantum, entero-colitis and dysentery abound in facts of clinical and practical importance. Much of the misunderstanding that surrounds this branch is cleared away. In the chapter on respiratory diseases attention is directed by illustration to the strip of relative dullness just above the spleen (Fleischman); this is well worthy of study for purposes of physical diagnosis. In our opinion, this chapter is the strongest one in the book. It is doubtful if a more forcible contribution on pneumonia and pleuritic effusions has appeared in any work on pediatrics. The temperature charts in lobar pneumonia show the leucocyte count, so important from a prognostic standpoint. The illustration showing displacement of the left pleural fold with flatness to the right of the midsternum is original with the author and of inestimable value in doubtful cases. Chapter seven deals with congenital and acquired heart disease, pericarditis and myocarditis; it is carefully written and covers the subject. It is gratifying to note the honesty of the author in stating that "a positive diagnosis of the exact lesion in congenital heart disease is in many cases impossible." The remarks on lumbar puncture with illustrations are practical and valuable. Among the subjects discussed in the chapter on diseases of the nervous system, tetany, congenital stridor of infants, chorea, amaurotic idiocy, spina bifida and the various forms of paralysis are deserving of special commendation. Rachitis with its different manifestations is fully described. The illustration showing thickened phalanges, is, in so far as we know, the only one of its kind thus far published. The topographical illustration on lymph nodes is of use for ready reference. Sporadic cretinism is presented as we would expect from one who has contributed so largely to the subject; cases at an extremely early age are detailed. From plate 26 a future diagnosis could be made by any one who never saw the condition. The curving inward of the tip of the little finger is very properly disregarded as pathognomonic of the Mongolian idiot. What little we know of the thymus is recorded. The various causes of splenic enlargement and the blood diseases including purpura and hemophilia then follow. Infantile scurvy is capitally illustrated and thoroughly described. The remarks on otitis in infancy and childhood, and the mastoid region should be read by all whose practice brings them in contact with children. Examination and diseases of the liver form a small chapter. The classification and pathological teachings of Delafield on nephritis, authoritative in every way, are closely followed, while dysuria, hematuria, renal calculi, new growths, enuresis, pyelitis, vulvo-vaginitis, etc., receive their share of study. A short chapter on diseases of the skin, and an index of authors for ready reference, brings the work to a close. The more one reads this book, the more interested does he become. Mention must be made of the high standard attained in the illustrations and plates, some of which need be seen but once to be carried in the memory forever. For future correction, we call attention to a number of typographical errors. We observe therefore that the author has given to the profession a work which has entailed years of exacting study and preparation, one in which the literature of the subject, despite the omission of several important references, has been sifted, and which shows the individuality of the writer to a high degree. We congratulate the author and publishers upon the completion of a life's work, and bespeak for it a rapid sale, a number of subsequent editions and a place in the library of every progressive physician.

The American Therapist.

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WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

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Original Articles.

METHYLENE BLUE: ITS DIAGNOSTIC AND THERAPEUTIC IMPORTANCE.

By F. C. FLOECKINGER, M.D., Taylor, Texas.

Very few unofficial pharmaceutical products are possessed of so wide a range of application as methylene blue.

It is an aniline derivative and has long been used as a coloring agent in the laboratory.

The *post mortem* on animals poisoned with methylene blue shows primarily a chocolate-like coloration of the blood, indicating its destructive action. Further we find an engorgement of the liver and a discoloration of the bile-ducts, as well as of the intestinal glands.

Experiments by Ehrlich and Leppmann proved that methylene blue possesses analgesic properties. The investigators attribute this effect to the elective affinity of the cylinder axes of the sensitory nerve endings, while Combemale ascribes the sedative action to the alteration in the blood.

Methylene blue possesses primarily two different physiological actions: first, it acts as a sedative to the motor and sensory nerves, and, second, it exerts an irritating effect.

Ehrlich and Leppmann were the first to employ this product in rheumatic and neuralgic affections, and in all cases they reported an amelioration of pain.

Lémoine reported his results in sciatica, neuralgia, and the crises of locomotor ataxia, and expressed himself very favorably as to its sedative effect.

In cases of insanity and hysteria the drug has proved a good sedative. Some authorities, however, note that the effect in hysteria is a suggestive one due to the discoloration of the urine. During the past two years I have had opportunity to test the sedative action of the preparation, and my experience proves confirmatory. In cases of hemicrania the preparation proved efficacious, but it required from one to two hours before an amelioration of the pain ensued. The dose employed was from 0.065 to 0.130 gramme (1 to 2 grains) every two hours. In cases of hemicrania I prefer the coal-tar products. The analgesic effect from the methylene blue lasted from 6 to 8 hours. In two cases the ingestion of 0.195 gramme (3 grains) caused stranguria, although I dispensed it with equal parts of nutmeg. In doses of 0.065 gramme (1 grain) this ill effect did not appear, and I conclude, therefore, that large doses are not advisable. The blue was discernible in the urine within 15 minutes after ingestion.

I also tried the drug in several cases of insomnia, but did not observe favorable effects. If taken in the afternoon, sleep ensued at night, but it was not of long duration. The patients awoke within 3 to 4 hours. Therefore I consider other hypnotics preferable to methylene blue in insomnia.

In acute articular rheumatism the analgesic effect of the drug was only transitory, and it is not as effective as the salicylic compounds. In cases of acute gonorrheal rheumatism its effect was very satisfactory, and in one case—in which the salicylic compounds proved useless—an amelioration of the pain followed 0.065 gm. (1 grain) doses of methylene

blue every 2 hours. Shortly after the first dose the patient felt relieved, and two additional doses eliminated the pain altogether. The analgesic effect lasted eight hours.

These experiments show that methylene blue exerts a sedative effect, but it is more pronounced in direct affections or alteration of the peripheral sensory nerves.

Achard and Casteigne undertook some experiments with methylene blue as a diagnostic aid in order to determine the permeability of the kidneys. They found that in diseased kidneys the permeability was delayed; in acute infectious disease, also in acutely diseased kidneys, methylene blue can be used as an aid in diagnosis.

As methylene blue exerts a stimulating effect on the excretory function of the kidneys, the product may also be used as a therapeutic agent in kidney diseases; it causes the elimination of all toxic accumulations in the blood, and thus prevents a congestion of the kidneys. In cases of Bright's disease of the kidneys this drug was of value only in the œdematous stage. In advanced cases, in which contraction of the kidney has commenced, the drug is useless.

In a case of ascites due to Bright's disease, I employed this drug, and the result indicated that the preparation is useful. I aspirated the greater part of the fluid from the abdominal cavity, mixed about one liter of this fluid with 0.2 gm. methylene blue, and returned it to the abdominal cavity. In the beginning I was obliged to make the aspiration every third day, and I observed that after the injection of methylene blue the accumulation of the serum was delayed for a long time, and only after nine days was it necessary to aspirate the fluid again. Death ensued after the fourth aspiration. Unfortunately I had no material at hand with which to test the preparation in these cases, but it is undoubtedly useful in such instances.

Leventhal used 0.259 gm. of methylene blue three times daily every other day in cases of acute Bright's disease and reports favorable results.

Methylene blue is an excellent microbicide, coagulating pus and preventing fermentation.

I also used this preparation in seven cases of cystitis and with good results; still its effects were more favorable when bladder irrigations were combined with its use. I employed 0.2 gm. in one quart of lukewarm water as a bladder irrigant, and in a short time the patients experienced great relief. When methylene blue was administered *per os* in cystitis, I noticed in all cases an increased excretion of pus after the first dose. Still after several doses this condition diminished, and the tenesmus and dysuria were very materially lessened.

In cases of acute blennorrhea and gonorrhea methylene blue with balsams is indicated; this produces an earlier diminution of the discharge than with the simple use of balsams. In these cases injections are unnecessary, though it is better if injections of protargol are used. In some cases of chronic gonorrhea I also employed a solution locally with good results.

Methylene blue diminishes the vitality and virulence of the micro-organisms and is without doubt one of the best anti-gonorrheal agents at our command.

Methylene blue is also a cholagogue; this action led Berthier to employ it in dysentery, and his results are very satisfactory.

Several months ago an epidemic of true dysentery occurred in this section and I had abundant opportunity to try the drug in these cases. Before I enter into a detailed account of the method of treatment, I desire to note that this is one of the best pharmaceutical products that we possess for the treatment of dysentery. Berthier only employed topical treatment of the drug, but a combined method is accompanied with more rapid results. I prescribe the following combination *per os* in acute cases:

R Methylene Blue Medic..... 2.0
Aq. Cinnamom..... 120.0
D. S. One teaspoonful every two hours.

In most of the cases when the pain and tenesmus were very marked I added to each dose 0.008 gm. of morphine sulphate. Furthermore I gave rectal irrigations of one half to one quart of warm water, to which were added one to two decigrammes of methylene blue. The patient was instructed to retain this as long as possible, though about five minutes is sufficient. This procedure was conducted by myself three or four times daily, and when I was unable to do so, one of the members of the family carried it out. After the very first injection the patients felt better; the rectal tenesmus diminished and from the second to the third day the stools became more fecal. Should the patients express a preference for capsules, then I dispense the drug with pulverized nutmeg. This prevents stranguria as well. When the stools become fecal, I discontinue the use of methylene blue *per rectum* and *per os*. In the usual run of cases the patient is convalescent in from five to six days. In two cases of chronic dysentery I tried methylene blue after injections of silver nitrate solutions had been employed with negative results. I administered it both *per os* and in the form of colon injections. The first patient was discharged cured in twenty-one days, and the second in sixteen. After these experiments I looked upon methylene blue as a specific in acute and chronic dysentery.

Methylene blue was first tried in malaria by Guttmann and Ehrlich. This idea was a result of the observation that methylene blue stained the plasmodia. Thayer, of Baltimore, also experimented with this drug in malarial fevers. Pilliet is of the opinion that the effect is to be attributed to the arsenic contained in impure methylene blue. Experiments have proven, however, that this theory does not hold. During the past two years I have employed methylene blue in the different types of malarial fever, and inasmuch as our county is a malarial district, I had ample opportunity to study its effects. My experience embraces about six-hundred cases of all types. It has the same effect in tertian and quotidian fever, but its action compared to quinine is somewhat slower. It certainly controls the attack, and what is of special significance, it prevents subsequent ones. This preparation may be considered in the truest sense of the word a prophylactic against malaria. When methylene blue is given at the first attack its effect is not so brilliant as that of quinine; but when the malaria plasmodia have entered the circulation, then the effect is the same as that of quinine. I made it an invariable rule in all cases of intermittent fever, in which I was called during the first stage (chills), to give a combination of methylene blue with muriate of quinine. This combination is more potent than methylene blue alone. If, however, several chills have already occurred, then I administer methylene blue with nutmeg, and without quinine. De Blasi was the first to call attention to this action of methylene blue, and I coincide with his experience. Still I must mention that it is the exception for the physician to be called to a malarial patient before a chill has occurred. Once the chill has appeared, the plasmodia are already circulating in the blood. Quinine works more quickly than methylene blue, and in about fifty per cent. of the cases two to four chills occur before the fever is broken. In combination with quinine the action is a far better one. One advantage which methylene blue possesses over quinine is that after the first dose the pains in the back and in the bones disappear on account of its analgesic effect.

After the administration of methylene blue in malarial fever the parasites are disintegrated, the mature forms being reduced to isolated segments; the chromatin substance remains intact, spore formation is modified and incompletely developed,

and the falciform bodies are transformed, losing their vitality. I administer 0.065 gm. of methylene blue every two to three hours during the day until the fever is controlled, and then I give the following capsule three times daily for twenty-one days.

R	Methylene Blue Medic.....	0.065
	Arsenic. jod.....	0.0016
	Hydrarg. jodat.....	0.0022
	Ferric. jod.....	0.0054
	Strych. sulph.....	0.0011

This combination is markedly beneficial in cases of chronic splenic enlargement due to malaria. I would furthermore direct attention to the fact that it is inadvisable to discontinue the capsules at once, because there occurs a reaction which weakens the patient. This is unquestionably due to the action of strychnine. The capsule is to be given only after meals. In general, I found that 0.065 gm. methylene blue four to five times daily is sufficient, and that large doses are harmful and cause a mild form of leucocytosis.

Martini gave 0.25 gm. methylene blue eight hours before the attack. I have also tried this method, and observed in some cases distinct symptoms of irritation, so that I concluded to adopt the afore-mentioned method of administration.

In the malarial diseases of childhood methylene blue is preferable to quinine. First, on account of the ease of administration, and second, because it acts as a specific. In children particularly good results are obtained. As a rule, I dispense methylene blue in cinnamon water every two hours until the chills disappear, and after that I use the following combination, which has stood me in good need.

R	Methylene Blue Medic.....	0.016
	Liq. kali arsenat.....	0.065
	Aq. cinnamom.	4.00

D. S. This quantity three times daily after meals.

If this medicine is taken for a long period of time it acts as a prophylactic, in that it renders the blood immune against the plasmodia. It must be noted, however, that this immunity only lasts for several months, as I have been able to determine from my investigations. The addition of cinnamon water has for its object the prevention of irritative phenomena, such as stranguria. In nine cases of malarial hematuria I administered methylene blue in doses of 0.065 gm. (1 grain) every two to three hours daily.

In four of these the bleeding diminished the following day, in three only on the third day, and in the remaining two, in which the hemorrhage lasted five days, I was forced to discontinue the experiment and resort to other medication. The last two cases, which were undoubted malarial hematuria, improved, and I am at a loss to understand why the bleeding could not be controlled with methylene blue. In these two cases irritative phenomena also occurred after the administration of methylene blue, an idiosyncrasy, in my opinion.

At the time of writing I have another case of malarial hematuria under treatment, which showed an improvement after the administration of two doses of 0.065 gm. (1 grain) methylene blue every two hours.

That methylene blue controls hemorrhage was observed by M. Strigower, who in 1896 used it in a case of morbus Werlhoffii. In this case the hemorrhage ceased after the third dose. In another case of malignant growth of the kidney he administered methylene blue with excellent results, and in his article he advises physicians to give this preparation a trial in hemorrhage diseases.

Although my ten cases of malarial hematuria are not proportionately large, still I consider it my duty to mention my observations in order that other physicians who have a greater material at their disposal may try this preparation in such cases.

Some physicians have applied methylene blue locally in malignant neoplasm and report good results.

H. R. Coston mentions an instance of advanced vaginal carcinoma, in which he used methylene blue successfully; the drug proved particularly useful in controlling hemorrhage and rendering the ulcerations clean. A cure, however, was not achieved. For these reasons methylene blue can only be considered palliative in these cases.

I have had no opportunity to try this preparation in such cases on account of lack of material.

One physician has observed that methylene blue must be given very cautiously to pregnant women, inasmuch as it causes contractions of the uterus; in no cases, however, in which I administered the drug to gravid women in doses of 0.065 gm. (1 grain) four to five times daily could I demonstrate to my satisfaction the existence of any such uterine contractions. Perhaps the larger doses give rise to them.

Nicolot experimented with methylene blue in order to determine the quantity of effusion in the pleural cavity. He mixed a certain quantity of this drug with a fixed quantity of salt solution and employed the different color stages as a scale. He conducted the experiments by aspirating a small quantity of exudate from the pleural cavity, mixing this with a certain quantity of methylene blue and then re-injecting both into the pleural cavity. After a short space of time he once more aspirated a quantity from the pleural cavity and compared its degree of color with that of the scale solution. In three cases he was able to determine exactly the quantity of pleural exudate. He furnished a positive result in that he undertook the aspiration of the exudate on the following day.

Tourlet and Raymond injected into the pleural cavity 0.097 gm. (1½ grain) methylene blue in order to determine whether the pleural layers maintained their powers of absorption. If half an hour after the injection the urine was blue, it was taken that the absorbing power of the pleura was active. These experiments also gave me an opportunity of conducting experimental observations on guinea-pigs and dogs. In cases of tuberculosis followed by empyema it is especially important to determine exactly the degree of pleural absorption. In order to arrive at some definite conclusion I injected cultures of tuberculosis into the pleural cavities of several guinea-pigs. As soon as I was able to observe a direct affection of the lungs in these animals I injected a salt solution of methylene blue in order to observe the absorption.

In the first and second stages, namely, the acute and sub-acute, I could demonstrate the absorption of the pleural layers; when, however, an empyema developed, this absorption ceased. Unfortunately, in the space allotted to me in this article, I cannot enter into minute details. I will, however, state that in the autopsies on the acute and sub-acute cases a discoloration of the pleural layers, as well as of the sub-pleural tissues and lungs, could be demonstrated. In chronic cases of tuberculosis, complicated by serous or purulent exudations, the discoloration of the surrounding tissues could be observed very slightly or not at all. These experiments are of great importance for determining whether the absorbent power of the pleural layers is in abeyance or not. In cases in which the absorption is at a standstill we are in a position to spare the patient the use of weakening purgatives and to remove the effusion by aspiration or incision.

Chas. Lewis in his experiments in pleurisy with effusion injected 0.324 to 1.0 gm. methylene blue dissolved in the aspirated exudate; the quantity amounted to from 60 to 90 cubic centimetres. He had for his object the determination of the absorbent powers of methylene blue, and he showed that the absorption of the exudate is hastened after the injection of methylene blue.

Renon and Latron conducted similar experiments and found that in serofibrinous pleuritis, despite the inflammation and continued exudation, absorption took place.

It can be seen from the experiments of Chas. Lewis that in cases of pleurisy with exudation, absorption takes place more rapidly if methylene blue is injected into the pleural cavity. In 24 cases of pleurisy with effusion he effected a cure in 14 days, whereas with other treatment it took as long as fifty days before a complete absorption of the exudate took place.

I had an opportunity of trying methylene blue in the manner advised by Dr. Lewis in four cases of pleurisy with effusion. In one case the exudate disappeared on the ninth day, in the other three it took until the twentieth day before a complete absorption took place. In one case of empyema I tried the preparation without result. It will be seen from this that in chronic empyema with fibrinous degeneration of the pleura methylene blue is not to be used. In acute cases with exudation methylene blue is useful.

Methylene blue has also been tried in diabetes, but I have not had any opportunity of testing it. In surgery it has been used as a diagnostic agent in operations for fistula, and also as an antiseptic.

In conclusion I desire to note that we have in methylene blue a specific for dysentery and malaria, and a sedative of great value.

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Ergot in Labor Cases.—In a strictly normal course of labor I deem it unnecessary to exhibit ergot post partum; if there be any undue blood loss, undue tendency to uterine relaxation, it may be given and the attendant will be on the safe side, but it should not be given before the placenta is born unless there be positive indicatives that one can expel the placenta before the ergot can act, that is within ten or fifteen minutes. Broadly, it is an obstetrical error to give ergot before the uterus is empty.—R. W. Holmes (*Philadelphia Medical Journal*, Aug. 9, 1902).

GONORRHEA AND CHANCROID.—PREVENTION AND CURE.

By M. A. AUERBACH, Ph.G., M.D., New York City.

There are three separate diseases which are properly described as venereal, the exact nature of which until a comparatively recent period was not appreciated. The distinction between two of them is even at the present time not recognized by a large number of physicians. These diseases are gonorrhea, chancroid and syphilis. The first two are strictly local, while the latter is a constitutional affection. The non-identity of gonorrhea with other venereal diseases was not established until Ricord wrote his treatise in 1838, while the difference between chancroid and syphilis was not known, or at least not clearly shown until 1852.

Gonorrhea is a virulent, contagious, muco-purulent inflammation, caused by a specific germ, the gonococcus, affecting the mucous membranes. It is chiefly seen in the generative organs, being usually met with in the male urethra, the vulvo-vaginal canal, the lining membrane of the prepuce; the uterus and the female urethra being less often involved. It also occurs in the conjunctiva, and, although I have as yet seen no such case, it is said to have been observed in the rectum, nose, mouth and umbilicus.

The most frequent cause of gonorrhea is unquestionably direct infection with the gonococcus, by coming in contact with the muco-pus derived from a person affected with the disease. A muco-purulent discharge of gonorrheal character, though not containing gonococci, however, may arise from contact with the vaginal secretions in cases of leucorrhea, with the irritating menstrual fluid, or even possibly from intercourse between two healthy persons if the coitus be too violent, prolonged or attended with unusual excitement. I have myself seen and treated cases of this kind.

Gonorrhea of the female generative organs is usually limited to the vulvo-vaginal canal, though the urethra is occasionally affected, as are likewise the lining membranes of the uterus and the fallopian tubes. The ovaries may be secondarily inflamed—furnishing a pathological analogy to the swelled testicles of the male — or peritonitis may ensue from the escape of gonorrheal discharges into the peritoneal cavity. The diagnosis from leucorrhea has been made easy by our modern advance in microscopy and bacteriology.

The chancroid or simple venereal ulcer (often called soft or non-infecting chancre) is a strictly, as heretofore said, local infection, resulting from contact with the secretion from a similar sore in the same or another person. It is usually acquired in impure coitus, but may be indirectly transmitted by means of towels, etc. No special bacillus has as yet been isolated. Any part of the body may be the seat of chancroid, though the most usual position is, of course, the generative organs — in the male about the preputial fold, corona glandis, frenum and urinary meatus, and in the female about the nymphæ or os uteri. It was formerly supposed that the cephalic region was insusceptible to this infection, but it is now known that the chancroid can readily be artificially inoculated upon the face.

The chancroid has no period of incubation, the varying intervals between exposure and the appearance of the sore depending upon whether the contagious matter is deposited upon an abraded, a delicate and soft, or a thick and callous surface. When artificially inoculated the first symptoms appear within a few hours, the inoculated point becoming elevated and surrounded with a red areola in the course of the second or third day. The papule thus formed in another day becomes a vesicle and subsequently a pustule, which either bursts, exposing the chancroidal ulcer, or dries into a scab, beneath which the ulceration progresses. If the chancroidal matter be deposited in an abrasion, the ulcerative

state may begin at once. The fully formed chancroid is thus usually developed from four to six days after exposure and appears as a round ulcer, from one thirty-second to a half inch, or even larger, in diameter, and adherent to the adjacent tissues. It has sharp-cut edges, but not so well defined as those of the syphilitic sore, at first surrounded with a reddish areola; the surface is covered with an adherent gray slough and furnishes gray slough, which is auto-inoculable. It is usually multiple, eighty per cent. of affected persons having from two to six each. The chancroid may present at its base a slight degree of hardness, which is the result of inflammatory action, but which must not be mistaken for the induration commonly observed in the true chancre, or initial lesion of syphilis. According to several observers, microscopic examination always shows the presence of elastic fibres in chancroids, mingled with pus corpuscles and epithelial cells.

The treatment of gonorrhea has undergone many changes in the last fifty years; but not until the discovery of its true cause, namely the gonococcus, has a rational plan of treatment been applied. Being a strictly local trouble, a strictly local-acting remedy is the only one from which a cure is to be expected. A host of preparations have been introduced for this purpose, some in the form of an injection, and others for direct application to the urethra (crayons) and vulvo-vaginal tract (pessaries). The majority of these preparations have proven to be worse than failures. The treatment which has proven most satisfactory in my hands has been a solution of gelatose-silver (albargin), a combination of silver with gelatose. This substance I find the most penetrating of all the silver compounds, and another feature is its non-coagulability when in contact with the muco pus of gonorrheal and chancroidal discharges. In the treatment of gonorrhea I have found it of great benefit to administer a mixture of potassium carbonate, two drams; tr. hyoscyamus, two drams; and water, one and one-half ounces: in teaspoonful doses three times daily, to render the urine alkaline. I forbid all articles of drink containing alcohol and all articles of food which are hard to digest. I see to my patients' bowels and insist upon a good evacuation daily. The Valentine irrigation method, so much spoken of, I find useful only as a means of cleansing the urethra, and therefore use it before making the injections of albargin solution, which I prefer to perform myself. I begin with a one-half per cent. solution, allowing this to remain in the urethra for five minutes. As my patient becomes more accustomed to the treatment I gradually increase the strength of the injection until I reach two or even five per cent. in some cases. In cases in which the patient is unable to present himself daily, he is allowed to make the injections himself at home, while the irrigations are given at my office every other day.

In the treatment of chancroid I find that the old method of burning often causes a very ugly slough, while excision is strongly objected to by most patients. I treat the ulcer antiseptically, and dust with albargin, using a dry gauze dressing, repeating the application with a renewal of the dressing daily if possible.

I have supplemented the above with the histories of the cases thus treated. I will leave the results to speak for themselves.

Case No. 1. Mr. R. F. came to my office suffering from a very mild attack of anterior urethritis (gonorrheal). I at once put the patient on my mistura alkalina and began injections of a solution of albargin one-half per cent., with the anterior irrigations. This patient made thirteen subsequent visits, after which all symptoms disappeared and I discharged him as cured.

I have since met him and he informed me that he has had no further trouble.

Case No. 2. K. M. Sent to me suffering with an attack of acute gonorrheal urethritis. He contemplated marriage in a few weeks and wanted to be cured in less than that time. He was willing to come to my office every day for treatment, so I took the case; however, not promising him a cure by that time. He made in all eighteen visits, during which the usual treatment with albargin solution and daily irrigation of permanganate solution 1:7000 was carried out. At the end of that time (18 days) all symptoms ceased and on examination I found that his urine was perfectly clear, hence I discharged him cured.

Case No. 3. Mrs. L. G. Called upon me at my office suffering with an attack of acute gonorrhea of the vagina and vulvo-vaginal glands. I advised rest in bed until the acute state had subsided, together with hot bichlorid douches 1:5000, and local application of albargin solution 2 per cent. I likewise injected some of the solution of albargin into the openings of the vulvo-vaginal glands by means of a blunt hypodermic needle. I kept up this treatment for the first two weeks, after which time I had her call at my office three times weekly. The duration of this case was six weeks.

Case No. 4. George E. Came to my office to be treated. On examination, I found two chancroids upon the antero-lateral surface of the penis. Both together measured about half an inch in diameter. The patient was a sailor and readily submitted to excision. I injected subcutaneously a two per cent. solution of nirvanin, which anesthetized the surrounding tissues, thus causing an absolutely painless operation. I then dusted the cut surfaces with albargin and dressed as any other wound. I changed the dressing and made applications of albargin every other day and, to my great satisfaction, the case was perfectly cured at the end of four weeks.

Case No. 5. B. E. Began treatment for posterior urethritis (gonorrheal) on July 2, 1902. I put the patient on mistura alkalina 1 dram three times a day, with daily injection of albargin, beginning with a one-half per cent. solution, increased gradually to 2 per cent. These injections were made through a soft catheter attached to the syringe, being preceded by irrigations. He further called at my office for treatment on July 25th, 30th, August 3rd, 12th, 23rd, 27th, and on September 4th I discharged him cured.

Case No. 6. V. C. Came to me on June 3rd for the treatment of gonorrhea. I put him on the usual drugs, and began the one-half per cent. injections of albargin. I made injections on June 6th, 9th, 12th, 18th, 20th, 26th, 30th, July 3rd, 12th, 23rd, 27th, and on August 4th I discharged him cured.

Case No. 7. J. R. Came to me for treatment on April 23rd, 1902, suffering with a very mild attack of gonorrhea. I gave him mistura alkalina and injections of albargin, beginning with a one per cent. solution. I injected and irrigated the urethra on April 25th, 29th and 30th, May 5th, 10th, 13th and 16th, and on June 20th discharged him perfectly cured.

Case No. 8. I was called to see patient on June 30th, 1902, and found her suffering from two very small chancroids on the left labia majora. I advised thorough antisepsis and left a prescription for albargin, which was to be dusted over the sore daily. I made subsequent visits on July 19th, 26th, August 17th, and on the 24th found everything nicely healed and discharged the case.

Case No. 9. Mary O., suffering from gonorrhea of the vagina and vulvo-vaginal glands, made her first visit on July 7th for treatment. I placed the patient in bed, and applied hot applications of bichlorid douche twice daily. On the 12th I began local application of albargin, 2 per cent., and continued the same on the 13th, 16th, 17th, 19th, 20th, 27th, 28th, August 3rd, 10th, 11th, 17th, and on the 26th, there being no further signs of the disease returning, I discharged her cured.

Case No. 10. Frank J. Was sent to me by a friend whom I had previously treated for a like complaint, namely, gonorrhea and chancroids. He made his first visit March 8th, and upon examination I found six chancroids surrounding the glans penis and gonorrheal urethritis. I prescribed mistura alkalina and injections of 1½ per cent. albargin solution for the gonorrhea, while for the chancroids I used albargin as a dusting powder. He came to my office for irrigation, injection and a renewal of the dressing for the chancroids on the following dates: March 10th, 12th, 14th, 19th, 21st, 24th, 26th, 28th, April 1st, 3rd, 5th, 8th, 10th, 13th, and on the 15th the chancroids had all healed. He continued his visits on the 17th, 23rd, 26th, 28th, and on the 31st he was discharged cured.

So much for the cures, now the prevention. A 25 per cent. solution of albargin in glycerin, painted with a small camel's hair brush into the urinary meatus of the male, has, in my experience, never failed.

Treatment of Bronchiectasis.—Dr. Albert Abrams (*The Medical Fortnightly*, April, 1902) states that in treating bronchiectasis two objects must be borne in mind, viz., to diminish the bronchial secretion and to prevent its putrefaction. The usual methods employed aim at the attainment of both objects. For the milder cases, inhalations and the balsamic preparations already referred to under general treatment are indicated. The most efficient methods are unquestionably the *creosote bath* (see general treatment) and intra-laryngeal injections. The former method may, if persisted in for a sufficient length of time (six months or longer) yield results tantamount to a cure. If no diminution of the quantity of sputa results from the creosote baths, we are almost certain to correct the fetor of the sputa.

The benefit of the baths is not so pronounced in children as in adults. Intra-laryngeal injections must be made frequently to be of any service, but their employment postulates unusual dexterity, which is not the gift of the average practitioner, who is, therefore, constrained to employ other methods. The pneumatic cabinet is a palliative measure nearly equal to the creosote baths.

Climate, especially a dry one, is indicated in bronchiectasis. To facilitate emptying the bronchiectactic cavities, the method of inverting the patient several times a day may be tried. The simplest method of attaining this object is to instruct the patient to hang himself over the edge of his couch, so that his legs rest on it while his body is supported by his hands on the floor. To diminish the fetor of the breath, garlic has been found to be very efficient. A clove of garlic may be chopped up and boiled in beef-tea, and administered several times a day. Garlic may also be given in capsules (two or three grains) three times a day. For children. drachm doses of the syrup of garlic, U. S. P., may be given three times a day and a proportionate dose to adults. The following mixture has been recommended by Molle, from which excellent results have been obtained:

Eucalyptol	10 parts
Creosote	25 parts
Tincture of benzoin	50 parts
Copaiba	80 parts
Oil of sweet almonds, q. s.	200 parts

Thirty drops of the mixture are injected with a small quantity of milk into the rectum, and the amount gradually increased to one or two teaspoonfuls. One injection a day suffices. This treatment must be continued for months. Every endeavor should be made to improve the patient's hygiene. Cod-liver oil with creosote may also be given. Pneumotomy for reaching the fetid cavities has been repeatedly performed, but results are not encouraging, unless we are dealing with a circumscribed bronchial dilatation. Therefore surgical intervention ought not to be encouraged unless there is a single superficial dilatation.

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Editorial.

DIARRHEAL AFFECTIONS IN INFANCY AND CHILDHOOD.

Investigators have been untiring in their energies to discover a definite bacteriological factor as the causative agent of the diarrheas of infancy and childhood, in the hope that with such discovery appropriate serum therapy could be instituted and many lives thus saved. The researches of ESCHERICH, MARFAN and BAGINSKY, in Europe, and of BOOKER, WELCH, FLEXNER, VEDDER, DUVAL and others, in this country, have served to throw more light on this very interesting and important subject, and we are now on the fair road to a better differentiation of the various forms of diarrhea. We have known that the coli group, streptococci, and the bacillus pyocyaneus could cause profuse discharges under favorable conditions, just as we were aware of the fact that ordinary fermentative changes in the foodstuffs could give rise to similar symptoms. We were, however, in doubt as to the occurrence in infancy and childhood of dysentery or colitis as we understand it; so much so that some years ago the leading pediatrists of this country advocated the discontinuance of the term in pediatric practice. The recent investigations of FLEXNER and his pupils have established beyond question that there is a form of colitis occurring in children, associated with muco-hemorrhagic stools, in which the Shiga bacillus is the etiological factor. With that fact settled and one set of diarrheas determined from an etiological standpoint, the way has been paved for a clearer and better understanding of the etiology of the different forms of diarrheal diseases as we see them in infants and children. Much difficulty must be anticipated in arriving at definite conclusions, for the field is an extensive one and the labor and application necessary are very arduous. The impetus has been given; let the good work continue.

OUR LEADING ARTICLE in this issue is from the pen of DR. F. C. FLOECKINGER, who contributes a very comprehensive and scientific discussion on the diagnostic and therapeutic importance of methylene blue. In addition to a rather complete resumé of the literature, he gives the results of his numerous experiments with the drug in different affections. Methylene blue is a drug which is gaining ground slowly but steadily. The lack of uniformity in the results obtained in the same class of cases may be attributed in part to the fact that the pure medicinal blue is not always dispensed as prescribed; the commercial dye (non-medicinal) is useless for therapeutic purposes. This drug, in truth, has a "wide range of application," as can be seen from its successful use as an analgesic, sedative, anti-rheumatic, anti-periodic, disinfectant, deodorant, gonococcicide, etc. It has been recommended by GAUDIER in chronic purulent otitis media, by BONNET in ozoena, by MORLON in ocular infections, and by ALTHEN and LANE in tuberculosis. In malaria it has been found that, while quinine affects the nucleus and pigment (chromatin) of the plasmodium, methylene blue destroys the plasma; in other words, while the young and early forms of the parasite are but slightly affected

by methylene blue, adult or more mature plasmodia (crescents) respond to its use. Quinine is a drug to which some individuals are so peculiarly susceptible that any other preparation of equal value proves a therapeutic boon; to children its administration is especially difficult, not only because of the inability to disguise the taste, but on account of the usual impossibility of dispensing the drug in pills or capsules. In these patients, methylene blue as described by the writer is deserving of an extended trial. It may be well to repeat a warning given by Dr. Achilles Rose, that when prescribing this drug abbreviation is to be avoided on account of the danger of procuring the impure or methyl blue.

We have been favored of late with several able contributions on the subject of gonorrhea in its various stages, an evidence of the efforts which are being made to solve this very difficult problem. In the acute variety, the prevailing opinion seems to be in favor of the use of a silver salt, but in its selection there is the greatest difference of views. In this issue, Dr. M. A. Auerbach relates his experience and results with albargin—a gelatose silver—in gonorrhea and chancroid. In the former, it is true that "a strictly local-acting remedy is the only one from which a cure is to be expected," although the possible involvement of the endocardium, pericardium, muscles and joints, and the reported instances of pyemia, do not justify the statement that gonorrhea is "a strictly local trouble." The doctor advises irrigation of the urethra as a cleansing agent; this method of treatment has heretofore been abused and many discharges have been kept up by its prolonged use, so that to-day its field of application is limited. In the treatment of chancroid, the tendency of the times is against painful cauterization, curettage and incision, and toward the antiseptic treatment as advocated by the writer. This method certainly seems rational and has been productive of excellent results.

THERAPEUTIC NOTES.

For eczematous conditions about the nails apply Lugol's solution twice daily.

In furunculosis, five drops of ammonia water, well diluted, every three hours, prove a useful adjunct to other measures.

A spray of eucalyptol, oil of wintergreen, and albolene relieves acute coryza.

Tampons of ten per cent. ichthyol in glycerin are valuable dehydrating and antiphlogistic agents in pelvic inflammation.

A solution of bichloride and hydrogen peroxide (1-2000) is recommended as a spray for diphtheria.

For gastro-duodenitis, phosphate of soda and calomel is a judicious combination.

As a local application to warts glacial acetic or nitric acid, nitrate of silver, a saturated solution of sodium hydroxide, acid nitrate of mercury, or hydrozone, may be tried.

Ichthyol in capsules of ten to fifteen drops, three times daily, is considered by Bulkley almost a specific for hemorrhoids.

Bromide of strontium in doses of half a drachm, three times daily, has been highly spoken of in the treatment of dysentery.

Formalin properly diluted is the remedy *par excellence* for sweating feet.

The salicylates and their various combinations are sometimes more efficacious in the treatment of chorea minor, than is Fowler's solution.

Spirits of camphor locally applied will heal ulcerations of the leg in a relatively short time; the applications, however, are painful.

In carcinoma of the stomach somatose is very useful.

Current Literature.

Hints for Babies.—(1) Give a baby plenty of water four or five times per day; (2) Give a baby a rockless bed to itself; (3) A baby should be held only to be nursed; (4) Massage and exercise a baby each day; (5) Give a baby a chance to lie naked and kick daily; (6) Never give a baby diluted alcohol, liquors, or coffee; it will acquire perverted appetites soon enough; (7) Teach a baby to hang by its hands and spring with its legs; (8) Don't advise a parent to give the baby a little soothing syrup, paregoric, or castor oil; in short, do no offhand prescribing at all; (9) If the mother is weak or anemic, correct any lesion, and give her calcium hypophosphite 5 to 20 gr. per day; thus, via milk, nourish baby; (10) If the baby is constipated, give the mother sodium phosphate; (11) Ventilate sufficiently, and keep room temperature below 75° F.; (12) A cartload of sand makes a healthful plaything for a baby.—*Texas Medical News*, January, 1902.

Beef-Juice in Infant Feeding.—The *Medical News* (May 31, 1902) says:

"There is good reason to think that during the period of literal infancy, that is, the non-speaking first two years, beef-juice is not to be employed as a regular article of diet, unless especially indicated. There seems to be no doubt, however, that at times its employment is not only justifiable, but entirely in accord with rational thought in the etiological treatment of infantile affections. . . . Needless to say, the properly expressed juice of meat is a precious concentrated, yet readily digestible, food. To speak of meat-juice as beef-cocktail is to misapprehend entirely its nutritive significance and to mistake its chemical contents. Properly prepared beef-juice is stimulant, but this effect is of secondary importance compared to its positive nutritive value. To confound beef-extract and beef-juice is to make a serious error. To condemn one because of the other is to deprive the physician of a very important practical auxiliary in the treatment of exhausted conditions, no matter whence derived and whether occurring in adults or in children. . . . Beef-juice is not a remedy for every disturbance of nutritive metabolism in the child; it is, however, a very precious accessory to other natural and drug methods of treatment, and its indications should be studied further. Its value wil repay the investigators.

Gonorrheal Ophthalmia of the New-born.—In a paper read before the Academy of Medicine on June 5, 1902, Dr. Carl Koller (*Medical Record*, July 5, 1902) said that irrigations of the vagina with antiseptic solutions before confinement have not much effect in preventing infection of the new-born. Credé's method, introduced in 1879 in his obstetric clinic, reduced his cases from 10 per cent. to 0.1 or 2 per cent., and was a great triumph in preventive medicine. If generally used, ophthalmia of the new-born would be entirely abolished. Ophthalmia of the new-born shows itself, with similar symptoms as in the adult, usually on the third day, sometimes up to the fifth day; graver cases may appear on the first day. It is generally conceded that, if the child comes under treatment with the cornea intact, the eyes can be saved with certainty. An exception are cases with malnutrition and failing health. Nitrate of silver in 2 per cent. solution should be applied at once. The lids should be well everted, so that the fold of the fornix becomes movable, when they should be brushed with the solution until they become white. This should be done daily. Every half hour the lids should be separated and the discharge washed away with a cotton swab saturated with boric acid. If it is deemed necessary to apply cold, ice should not be used locally, but simply cold cotton pads should be applied. Kalt irrigates the eyes two or three times a day with a 1 to 5,000 per-

manganate solution, using about one quart each time, with very good results. Treatment with nitrate of silver and simple rinsing away of the discharge insures good results, and this is better in the hands of the lay people than the irrigator.

Habitual Constipation. — This condition should not be considered cured, writes I. Boas (Diseases of the Intestines) until the bowels move regularly without any mechanical or medicinal co-operation, the diet being normal or nearly so. Children should early be taught to have a set time for their daily evacuations, and in them the habitual use of laxatives should be avoided. For adults Petzoldt's diet is applicable. It is as follows: 7 a.m., a glass of cold water; 8 a.m., a liberal breakfast with sweetened coffee, a good deal of butter, honey and graham bread or pumpernickel, after which the patient should go to stool; 1 p.m., meal of meat, a good deal of vegetables, salad, stewed fruits, farinaceous food, half a bottle of light wine; 7 p.m., meat, with a good deal of butter, graham bread, stewed fruit and beer; 10 p.m., fresh or stewed fruit before retiring. Buttermilk or Kefir, or a diet rich in carbo-hydrates may be sufficient without the above regime. Such a diet, though, is obviously not suitable in diabetes mellitus, glycosuria, obesity, gastric atony, hyper-acidity, ulcer of the stomach, gastric dilatation, carcinoma of stomach or intestine, and in flatulence. The glass of water in the morning, with a pinch of salt added, is excellent in itself. There are patients who are cured by absolute rest in bed after other means have failed. Yet, in general, exercise is a good thing, and especially that which works the abdominal muscles, such as rowing or lying down and raising the trunk to a sitting posture without the assistance of arms or legs. A powerful measure is the use of cold compresses, or alternate cold and hot sprays over the abdomen. The ether spray has been used in obstinate cases for a number of years. The continued use of laxatives is not necessarily harmful, many persons taking a simple pill for years. But if these laxatives be inadequate or occasion gastric or intestinal discomfort, other means must be adopted. The state of the stomach, liver, etc., must be considered; for instance, calcined magnesia and Carlsbad salts are also antacids, and podophyllin and euonymin are cholagogues. In cases of flatulent colic small doses of opium will relieve the pain, and often promote an evacuation. Suppositories, enemata, etc., are useful only temporarily. *(The Medical News*, July 26, 1902.)

Mycotic Gastritis.—The treatment of this condition as advised by Dr. J. W. Torbet (*The Texas Medical News*, August, 1902) is: First, to control the fermentation; second, to relieve the unpleasant symptoms; third, to treat the lesion.—To cleanse the stomach, copious drafts of warm water may do it by causing vomiting, but the stomach tube is the best method. Use warm water and one-tenth glycothymoline or soda bicarbonate as the best means of cleansing out all fermenting material from the stomach. Then cleanse out the entire alimentary canal with calomel and soda, followed by castor oil or a Seidlitz powder. To relieve the unpleasant symptoms, the vomiting and pain will usually subside after the stomach-washing. Pain may require codeine or morphine hypodermically. The stomach will be cured by the above recipe, with the addition of carbolic or ammonium fluoride for a few doses until the fermentation ceases, then substitute strychnine or nux vomica, and continue for several days, returning to sweets only after the stomach seems normal. The third form of gastritis is toxic and is caused by the introduction of poisons from without. It may be caused by alcohol, tobacco, caustics, and various other medical poisons. The history, the smell of vomited material, and the rapid onset of the acute symp-

toms in the midst of health will render the diagnosis easy. The stomach tube is far the quickest and safest means of cleansing the stomach of all poisons, except when severe caustics have been swallowed and perforation is possible. Copious drafts of warm water can be poured in containing the necessary antidote and syphoned out while the patient lies on his left side. Two recent cases of poisoning, one having swallowed a teaspoonful of iodine and the other carbolic acid, were treated with the stomach tube alone, with no toxic symptoms or but little subsequent soreness. The first was washed with starch water and slightly changed and bitter. The bitter taste is not, Ewald says, due to bile, for fresh bile is not bitter; but due to the acrid taste of peptones and fatty acids, such as found in every artificial digestion. The diagnosis is usually easy.

Recurrent Vomiting. — Charles W. Larned (*American Medicine*, August 16, 1902), in reporting two cases of this rare condition in children and discussing the symptoms and differential diagnosis, says of the treatment that up to the present time nothing has been found efficacious in cutting an attack short, though certain measures seem to alleviate somewhat the suffering of the patient. The first indication is to stop all food and drugs by the mouth, as they do no good and their exhibition merely increases the frequency of the vomiting. Medication and feeding should be entirely by way of the skin and rectum. Morphin and normal salt solution through the skin, predigested food, salt solution and opium by the rectum are useful. In the majority of cases it is not necessary to resort to hypodermic medication, as the thirst seems fairly well controlled by retained injections of salt solution. Tincture of opium in the same way seems to act about as well as morphia hypodermically. The secretion of urine seems also to be as favorably affected by this method as by hypodermoclysis. The bromides and chlorals have advocates, but they are certainly inferior to opium. Flushing out the lower bowel once daily with a copious, high injection of normal salt solution seems of some benefit. Blisters over the epigastrium merely increase the child's discomfort. With the subsidence of the vomiting, a calomel purge is indicated. Between attacks the child should lead an out-of-door life; he should not be subjected to over-fatigue or excitement; the bowels should be carefully regulated, and most important of all, he should be made to drink a good deal of water.

Atropine.—Drs. Wallace C. Abbott and Wm. F. Waugh (*The Alkaloidal Clinic*, Sept., 1902), in a lengthy article on the subject, arranged an alphabetical therapeutic summary of the drug as follows:

Abortion: Increase uterine contractions and check hemorrhage.

Abscess: Apply locally to abort by vaso-dilation, and relieve pain.

Acidity: Checks hyperchlorhydria.

Acne: For greasy skin, with free sweating.

Adenitis: Locally, relieves pain, and favors resolution.

After-pains: Steady contraction, relieves pain.

Alcoholism: The basis of all secret cures; fullness of the head it causes, renders the liquor effect disagreeable.

Aphonia: The hysteric form has been relieved by full doses.

Asthma: When the skin is cool and moist, sputa loose.

Bladder, irritable: Sedates irritability, checks nocturnal enuresis.

Boils: Applied in plaster, relieves pain and hastens maturition.

Bronchitis: To check profuse mucous flow, bronchorrhea, to relieve irritative cough.

Calculi, biliary: To relax spasm of ducts and let stone pass, easing pain.

Calculi, renal: To relax spasm of ureter and allow stone to pass.

Cataract: Immature forms benefited by instillations.

Catarrh, acute nasal: To abort the attack and dry up secretion.

Cerebral anemia: To increase temporarily cerebral blood supply.

Cerebral congestion: For less active forms of hyperemia.

Cholera Asiatica: Directly opposes the vagus irritation indicated by symptoms, for cramps, pain, diarrhea.

Cholera infantum: Same as preceding.

Cholera Morbus: Same as preceding.

Chordee: Relieves all but febrile cases.

Chorea: For cerebral anemia, as antispasmodic, as hypnotic in small dose.

Colic, intestinal: Relieves spasm, pain, constipation.

Colic, lead: The best remedy for pain, spasm, obstruction.

Constipation: Small doses paralyze inhibition, allays spasm.

Convulsions: For congestive, teething or whooping-cough forms.

Cough: Spasmodic, nervous, sympathetic, asthmatic, allays irritation.

Croup: Relieves irritation and stimulates respiration.

Cystitis: Relieves irritability, breaks attacks due to catching cold.

Delirium: Relieves that of cerebral anemia.

Delirium tremens: For insomnia with cyanosis, cold skin, coma vigil.

Dementia: Stimulates cerebral circulation, relieves insomnia.

Dengue: For sweating stage, when excessive or weakening.

Dentition: For the convulsions.

Diabetes insipidus: Checks excessive flow.

Treatment of Whooping-Cough.—Monti (*Bulletin Général Thérapeutique*, Vol. cxliii, No. 18, 1902, p. 713) gives the following review of the treatment of whooping-cough: 1. General treatment: Place the child in a well-lighted room, the temperature of which should be kept between 64° and 68° F. The removal of the small patients to a temperate climate during winter is excellent. Avoid variations in temperature. 2. Local treatment: Inhalations of boric acid and sodium salicylate. Monti prefers inhalations of carbolic acid and menthol, combined with quinine internally. Birch-Hirchfeld recommends the following:

Carbolic acid	30 drops
Pure menthol	15 grains
Distilled water	6 ounces

Six drams of this solution should be inhaled daily by means of Siegle's apparatus, or one similar. 3. Internal treatment: He prescribes belladonna, as follows:

Powdered belladonna	1.5 grains
Sodium bicarbonate } of each	22 grains
White sugar } of each	22 grains

To be taken 1 to 3 times daily in capsule.

Stepp, Feer and Marfan recommend the administration of bromoform, as follows:

Bromoform	47 drops
Oil of sweet almonds	4 drams

This is shaken thoroughly and added to

Acacia	4 drams
Cherry-laurel water	1 dram
Distilled water	4 ounces

In Monti's experience quinine has given the best results. He prescribes:

Quinine tannate } of each	15 grains
Sodium bicarbonate } of each	15 grains
White sugar } of each	15 grains

For 6 powders, one every 2 hours.

—*American Medicine*, Sept. 6, 1902.

Anæsthesin for the Production of Local Anesthesia.—Dr. Dunbar (*Deutsche med. Wochenschrift*, May 29, 1902) writes:

While still occupied with the elaboration of my recently published observations upon the action of anæsthesin, and especially with the chlorhydrate of the same, as a local anesthetic, I received a communication from Dr. Ritsert to the effect that he had succeeded in bringing this substance into a form soluble in water, so that it became possible to use it hypodermically in concentrated form. This discovery appeared to me to be a fortunate sequel to the mixture which I had already devised (anæsthesin chlorhydrid 0.25, morphium chlorhydrid 0.015, aq. destill. 100). The anesthesia obtained through

this mixture by subcutaneous and intradermic injections appears to me to be the most complete imaginable, and the result persists in all its intensity for at least half an hour. The tissues injected remain during this time free from pain. By reason of this circumstance it seems to me that the addition of morphia may be dispensed with. Phenomena of irritation I have never observed after the injections. The solution, like the substance itself, is nontoxic, as has been shown by the exhaustive tests made by Professors Kobert and Binz. The duration of the permanence of the solutions is unlimited as far as my experience has gone. When anæsthesin is applied to wounds, the healing is not interfered with, and this fact, in connection with the permanence of the solutions, gives us reason to believe that the drug has antiseptic qualities.

I recommend anæsthesin to every surgeon, not only as a substitute for cocain, but as a remedy which far exceeds cocain.

Treatment of Malarial Hemoglobinuria.—The *Virginia Medical Semi-Monthly*, September 12, 1902, says of a paper by Dr. J. S. Helms that quinine is the antidote par excellence. All other drugs pale into insignificance in comparison with it. This observation is based on observation of 35 cases in Florida. Hemoglobinuria is produced in malaria solely by the hemolytic action of the malarial parasites and their toxins — the process being identical to the processes which take place in the blood in any acute malarial infection. But quinine does not produce hemoglobinuria. The suggestion that quinine in large doses has an irritating effect on the kidneys in young children is true. But Dr. Helms has never seen a case of hemoglobinuria in a young child, following the administration of quinine — even in excessive doses. Those cases recovered without distressing symptoms other than the urinary suppression. The irritating effect of quinia upon the kidneys would produce hematuria rather than hemoglobinuria. The cases of urinary suppression occurring during hemoglobinuria are produced by the effect of the parasites and their toxins, and not by the quinine.

In cases where the hemoglobinuric parasites have disappeared from the blood through natural forces — cases of spontaneous recovery — quinine is not indicated. The microscope should determine the diagnosis.

However given, care must be taken that quinine is absorbed. Administration by the rectum gives uncertain and unsatisfactory results. The subcutaneous method is the safer, especially if the bimuriate, which contains the biggest per cent. of quinine and is the most soluble preparation, is used.

A concentrated solution is best—such as one-half grain of the bi-muriate in each minim — injected undiluted. Boil the solution immediately before injecting, and inject hot from a sterilized syringe, after cleansing the skin at the site of the puncture. Thrust the needle in vertically and as deep as the length of the needle will allow in the muscular tissue; the buttock is a good place. This method is somewhat irritating; but having adopted it more than one hundred times, he has yet to see an abscess, tetanus or any other harmful effect result. It is necessary that the technique be perfect. If the exacerbations are frequent, irregular, and characterized by chills, increased hemoglobinuria and hyperpyrexia, or the paroxisms are continuous, he does not hesitate to give as much as 20 grains every 4 or 6 hours until the exacerbations are checked; in milder cases 10 to 15 grains every 4 to 6 hours should be given.

When the stomach can retain and absorb the medicine, Warburg's tincture sometimes succeeds when quinine by the mouth fails. The powdered extract put up in elastic capsules has proven a most satisfactory method of administering the formula of Dr. Warburg.

The administration of calomel in large doses is essential for its stimulating effects upon the liver and intestinal glandular system, as also for its diuretic effect. When calomel produces copious black discharges of almost tarry consistence, experienced clinicians entertain favorable opinions as to the recovery of the patient. Hyposulphite of soda, sulphate of magnesia, and other saline cathartics are useful adjuvants to calomel.

Diuretics should be given in cases of diminished secretion or suppression of urine. Turpentine, sugar of milk, hot fomentations and saline enemata are the most useful diuretics.

Some Uses of Quinine.—The Philadelphia *Medical Journal* (Aug. 30, 1902) abstracts the following from an article by Alfred Martinet (*La Presse Medicale*, No. 27):

In simple malaria 15 grains of quinine should be given from 8 to 10 hours before the expected chill. This should be given in gradually increasing intervals. When malaria is pernicious, quinine should be frequently repeated. When cachexia exists, iron and arsenic should be added. Quinine is of service in typhoid fever, septicemia and other febrile diseases. It may be of value in persistent epistaxis, dental hemorrhage, hemoptysis, metrorrhagia, etc. It is useful to cause uterine contractions after parturition. It has also been employed for exophthalmic goiter and certain aortic affections. Its great use is in migraine, neuralgia, vertigo, cough and other vasomotor disorders. Jaboulay has used quinine to prevent the recurrence of malignant tumors.

Quinine by Hypodermoclysis.—The *Med. Record* (January 25, 1902) abstracts the following: J. W. Gray, Jr., says that the principal objections to giving quinine by intravenous injection are the difficulty of the technique and the danger of paralysis of the heart, if the solution be thrown too rapidly into the circulation. However, if slowly and carefully done, it is safe and effective. He advises the method of hypodermoclysis, or the administration of a weak, hot solution, one-fourth to one-half of 1 per cent. of quinine in deci-normal salt solution, by hypodermoclysis. The most dangerous manifestations in all malarial paroxysms are characterized by the stasis of the circulation and imperfect elimination of toxins and waste products, and the author says that he knows of no better method of combating that tendency than the ingestion of a large quantity of deci-normal salt solution. The addition of the small percentage of quinine in no wise detracts from its value, nor does it add to the irritation, so that we are able to meet two therapeutic indications at once. The solution that he prefers is 30 grs. of bimuriate of quinine and iron in a pint of deci-normal salt solution. He uses a medium-sized aspirating needle. The solution may be injected, with due aseptic precautions, into the loose subcutaneous tissue in any part of the body, or in urgent cases it may be thrown directly into a vein. The injection is not very painful, the absorption is rapid, cinchonism is prompt, and induration or local necrosis has never been produced. — *Memphis Medical Monthly.*

Internal Use of Carbolic Acid.—In a paper read before the Medical Association of the Greater City of New York, Dr. J. Henry Dessau (*Medical News*, August 9, 1902) makes a plea for a more extended use of this drug internally, advocating it as an internal antiseptic. He believes it to be a specific against the disease action of a certain class of germs. His experience with its therapeutic effects has been chiefly in the treatment of catarrhal complaints involving the respiratory tract, and particularly in influenza among infants and children. His results from the use of carbolic acid have been better and quicker than from any other treatment. They have been especially satisfactory in those cases in which it has been almost impossible to keep the little

patients in bed. The method of administration preferred is in the form of solutions of the strength of 1, 2, 3 and 5 per cent. of chemically pure carbolic acid. An infant under one year old receives a teaspoonful of the 1-per-cent. solution, while a child of five years may get the same dose of a 5-per-cent. solution, every two hours. Adults may take a tablespoonful of the 5-per-cent. solution. A small amount of glycerin aids in preparing a more complete solution, and cinnamon water is useful as an excipient to assist in disguising the pungency of the acid.

The author believes that carbolic acid is best indicated in those affections in which the disease-germ is of a weak nature and manifests its pathological action principally upon the mucous membranes. He also believes that its field of usefulness will eventually prove broader than it is at present, and that such diseases as erysipelas, scarlatina, and even typhoid fever and pneumonia will prove amenable to its therapeutic effects. He thought there was no valid reason why carbolic acid should not show as good results in in pneumonia as creosote, and the advantage of the acid over the latter pharmaceutically as an internal remedy was, that for children it makes a better solution and has a less disagreeable odor. It has been found by him and others perfectly harmless and free from secondary effects when administered in the doses mentioned.

Burns. —A. Ravogli (*Cincinnati Lancet Clinic*, September 20, 1902), in an exhaustive article on the subject, states that in a burn of the first erythematous degree the treatment is limited to the application of dry powders, such as subnitrate of bismuth, or alumin plumbosum. Rosslenger advises the exclusion of salves and baths, so as to avoid the maceration and the excoriation of the epidermis, which constitute open doors to infection. In case of extensive excoriations, after a few days a salve can be used to protect the corpus mucosum. The following is a good formula :

Bismuth subnitrate	8.0
Acid. boric.	4.5
Lanoline	70.0
Ol. olivar.	20.0

In case of severe pain and swelling the application of compresses dipped in Burrow's solution, subacetate of lead and alumin, has given good results.

In the second-degree burns, when blisters are distended with serum, it gives great relief to the patient to have them opened, leaving the epidermis in place so as to protect the denuded papillary layer. A dressing, which protects the burned skin from contact of the air, is the most beneficial. Kaposi recommends the old carron oil, ol. lin. and aq. calc., which is applied on linen or cotton. Wertheimer recommends the use of this calcareous liniment, with the addition of 1 per cent. of thymol.

In our patients the application of carron oil has been quite useful, has relieved the pain, protecting the excoriated surfaces, and when removed we have begun with a salve of subcarbonate of bismuth and oxide of zinc.

A. E. Verney is entirely opposed to the use of linseed oil and lime water, which he considers dangerous on account of infecting the wounds. He claims that any dressing which protects the burn from contact of the air stops the pain. On the blisters sterile gauze is sufficient. On opened blisters he applied iodoform gauze and then packing with cotton. The dressing is left for a week and is removed in the bath.

Myringitis.—

℞	Plumb. acet. bas	0.15
	Aqu. destill.	50.0
	Tinct. opii simpl.	1.0
M.	Sig.: Ear drops.	

—Gruber.

Chronic Bronchitis in Children.

℞	Ichthyol	gr. xxxij
	Glycerini,	
	Spir. aurantii	āā ʒ ss
	Aquae	ad ℥ ij
M.	Sig. ʒ i *t. i. d. p. c.*	

—W. B. Jennings.

Book Notices.

A Compend of Human Physiology, especially adapted for the use of students. By Albert P. Brudbaker, A. M., M. D. Eleventh Edition, Revised and Enlarged, with Illustrations and a Table of Physiologic Contents. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1902.

The fact that this little compend has passed through eleven editions is sufficient proof of its need and merit. In its presentation of the subject, the volume fulfills every indication for which it was intended, and offers to the student a valuable resumé of the most important physiological studies. The chapters are well arranged, the illustrations very good and the table of physiologic contents at the end is a fitting climax to so excellent a quiz compend. We can heartily recommend it to students.

The Practical Medicine Series of Year-Books, comprising ten volumes, on the year's progress in medicine and surgery. Issued monthly. Under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate School. Volume viii. Pediatrics and Orthopedic Surgery, edited by W. S. Christopher, M.D., John Ridlon, A.M., M.D., Samuel J. Walker, A.B., M.D. July, 1902. Chicago: The Year-Book Publishers, 40 Dearborn St.

Only those who have kept abreast of the advances in pediatrics during the past year and a half can fully appreciate how thoroughly the most important work in this field has been abstracted. Great stress is placed upon the development of the child, which, as the editor puts it, is the "keynote" of pediatrics. The abstracts are classified under the headings of etiology, pathologic resultants, heredity and nutrition, and reach to the number of one hundred and ninety-six. In orthopedic surgery only such contributions as appear of interest or especial value are selected. Editorial remarks by the editor enhance the value of this section to a marked degree. This series, as heretofore stated, fulfills a want of the general practitioner, and should form a part of his medical library. It is to be hoped that the publishers will continue to place such valuable volumes at the disposal of the profession.

SELECTED PRESCRIPTIONS.

Acute Bronchitis.—

℞ Extracti belladonæ..... 0.1
Extracti hyoscyami..... 0.2
Pulveris gummosi 3.0
M. ft. pulvis. Div. in dos. No. x.
Sig.: One powder three times daily.
—Neusser.

Pertussis.—

℞ Pulv. rad. bellad..... ..... 0.1
Natr. bicarb.....
Sacch. alb..... āā 1.0
M. ft. pulv. Div. in dos. aequ. No. 10.
Sig.: One to ten powders daily, depending on the age of the child. —Monti.

Cerumen.—

℞ Natr. carbonic..... 0.5
Aqu. destill.....
Glycerin..... āā 5.0
M. Sig.: Ten drops into the ear three times daily. —Politzer.

Tooth Powder.—

℞ Pulv. oss. sep..... 40 0
Pulv. rad. ir. flor.....
Pulv. mangn. carb..... āā 5.0
Ol. menth. pip..... gtts. v
M. f. pulv. subtilissim.
D. S. Tooth powder. —Scheff.

Chronic Prostatitis.—

℞ Iod. pur..... 0.1
Kal. iodat..... 0.4
Aqu. dest..... 10.0
Sig.: As an injection. —Albert.

Hyperemesis Gravidarum.—

℞ Morph. mur..... 0.2
Acidi acet. glacial., q.s. ad. sol.
Chloroform..... ..... 5.0
Alcohol absol..... 15.0
D. S. Five drops in sugar water.
—Schauta.

Eczema Marginatum.—

℞ Chrysarobin..... 5.0
Vaselin..... 50.0
M. Sig.: Apply twice daily.
—Kaposi.

The American Therapist.

A MONTHLY RECORD OF MODERN THERAPEUTICS,

WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

VOL. XI. NEW YORK, DECEMBER 15, 1902. No. 6.

Original Articles.

THERAPEUTICS OF PICRIC ACID AND CALCIUM SULPHIDE IN GONORRHEA.

By L. R. McCREADY, M.D., Grand Rapids, Mich.

During the past quarter of a century he medical profession, both of thist country and abroad, has become convinced of the fact that specific infection of the male and female genito-urinary tract presents a class of conditions whose gravity was prior to that time little realized. The development of new methods of treatment, following a remarkable amount of research work along pathological lines, has at last brought forth a realization that we are but infants in treating this class of ailments.

Undoubtedly the general practitioner, who occasionally, probably daily, is brought in contact (figuratively) with gonorrhea, has his routine course of treatment, which generally consists of the old Lafayette Mixture and a suitable (?) injection.

The proper appreciation of the good results which will follow a scientific application of proper therapeutic agents has led me to believe that the treatment which I shall presently outline will, if adopted, aid not only the patient but add materially to the practitioner's income and often prevent the patient calling on the so-called specialist for assistance, when this class of cases belongs by right to the general practitioner, the Grand Old Man of Medicine. Gonorrhea, the most frequent and typical disease affecting mucous membranes, a virulent process of sexual origin, occurs much more frequently in the male than in the female; hence, while the general pathological invasion is similar, the treatment outlined will be particularly adapted to that of male urethritis.

The typical case presenting for treatment: A careful examination, both macroscopically and microscopically, should be made. The presence of any indication of other difficulties — phimosis, etc. — should be inquired into. The patient should be thoroughly instructed in the fact that we are warranted in asserting that the disease is such, that without proper attention it will lead into pathological conditions making it one of the most far-reaching and formidable diseases of which human flesh is heir. The diet should be restricted to plain, wholesome foods and avoidance of all alcoholics and tobacco. He should bathe daily; take gentle exercise if of sedentary habits; and, if he engages in active labor, be instructed to avoid all dangers of strain, etc.

As most of the patients complain of the pain on urination, which is occasioned by the acid condition of the urine and the forcible distention of the inflamed urethra, I have been in the habit of commencing my treatment by administering:

℞ Potassium bicarbonate ..... ʒ ij
Tr. gelsemium.
Tr. hyoscyami .....āā ʒ i
Aqua dest.....q.s. ad ℥ iv

Sig. ʒ i in a half glass of water *t. i. d.* following meals.

(*N.B.* — Alkalines should be administered following food.)

Calcium sulphide, in the form of a one-grain tablet, is administered every two hours until saturation, and then kept at

that point. Forty-eight hours after the development of the discharge the patient is placed on an injection of picric acid ½ per cent., which he is instructed to use at body temperature twice daily. Every second day he reports for a deep urethral irrigation with a warm 1 per cent. picric acid solution, which is gradually increased until a 2 per cent. solution is tolerated.

The urine is carefully observed at stated intervals, both by the two-glass test and chemical analysis. The system is to be supported by tonics, the best being triple arsenates. The bowels are to be kept active with an occasional pill, compound cathartic, U. S. P., and once in three days a Seidlitz powder before the morning meal. As the discharge declines, it is often advisable to place the patient on a freshly prepared fluid extract of Saw Palmetto in full doses, with instructions to take every dose in one-half glass of water. Painful erections are controlled by a tablet of camphor, hyoscyamus and valerian.

The above treatment, simple as it may appear, has been the means of curing over eight hundred patients to my personal knowledge during the past three years; during that time I have become thoroughly convinced that the most active gonococcicides we have at our disposal are picric acid and calcium sulphide. Nargol, protargol and other salts of silver have been used by many eminent authorities, but I have found that they lack the efficacy of the above treatment.

INJECTION FOR SYPHILITICS.—

℞ Lanolin..... 2
Mercury bi-distilled..... 6
(Triturate until mercury is extinguished.)
Liquid albolene..... 2

M. Sig. Inject one grain every three or four days. —HEIDINGSFELD.

GALACTOGOGUE.—

℞ Calcii glycerinophosph..... ʒ i
Tinct. nucis vomic. ..... ℥ ss
Elix. calisayae ..... ℥ iij

M. Sig. ʒ i *t. i. d.* —*Journal A. M. A.*

THE TOXEMIA OF PREGNANCY.

By GEORGE L. BRODHEAD, M.D., New York City.

It is the opinion of the best authorities of the present time that the cause of puerperal eclampsia is a toxemia, resulting from the accumulation in the blood of poisonous toxins, the exact nature of which we do not as yet know. Undoubtedly the liver and kidneys are in the main responsible for the condition, but defective action of the intestines and the skin must also be considered as a causative factor. Formerly the presence of albumen in the urine was considered to be the most important index of the condition of the kidneys, but in the examination of the urine to-day we note not only the presence or absence of albumen, but also the amount of urea which is excreted in the twenty-four hours.

Each patient should be carefully instructed to send specimens of urine at regular intervals, the quantity for twenty-four hours having been measured and the specimen taken from the mixture of all that has been passed. In this way only can the physician judge of the manner in which the kidneys are performing their proper functions, as far as elimination is concerned. Microscopic examination alone will give positive evidence of organic changes in the renal structures, and therefore the microscope is of the greatest help in the diagnosis of the true conditions present in any given case. In the absence of pathological lesions, which in themselves would indicate the termination of pregnancy, the nervous symptoms which are caused by the toxemia must be carefully considered in deciding whether or not the uterus should be emptied.

One finds, for example, that some patients habitually excrete a comparatively small amount of urea, yet feel very well. But the progressive diminution of urea excretion must always be observed with anxiety and appropriate treatment instituted. First of all, the diet must be regu-

lated and proper hygienic measures advised, following which medical treatment may be necessary, and in severe cases operative procedure to terminate pregnancy.

In the milder cases, the diet should be restricted to the white meats, green vegetables, fresh fruit and milk. In the severe cases, milk alone should be given. Large quantities of water should be taken during each day, and if the amount of urine passed is small, some diuretic, such as the citrate or bitartrate of potash, should be prescribed.

A pleasant method of administering the latter drug is to add ℥ss of the salt to one quart of weak lemonade, the patient being advised to drink freely of it. Flannel should be worn next to the skin, and the patient warned against exposure to cold and wet weather. A warm soap and water bath should be taken daily, and moderate exercise advised; a brisk walk in the open air proving, as a rule, of great benefit as a good general tonic. If possible, the bowels should be regulated by diet, exercise and large amounts of cold water, but in many cases medicine must be given.

In my experience, the preparation of cascara sagrada, known as kasagra, has proven to be most efficient and valuable. Some patients require a very small amount, one-half teaspoonful at night several times each week, acting admirably; other patients find it necessary to take as much as fifteen drops or one-half teaspoonful in the morning, again at noon, and perhaps one teaspoonful at night. The bowels should be freely evacuated at least once each day. In the severer cases, treatment directed to the skin, bowels and kidneys must be energetic and followed out with close attention to every detail. A hot bath should be taken each day, milk diet given, the patient kept in bed, and the bowels moved freely. For high-tension pulse, chloral and nitroglycerin act well, the doses being regulated by the degree of tension and the response made to the use of each. Headache is relieved by the same drugs, with the addition of sodium bromide, acetanilide or camphor. Enteroclysis with the Kemp tube is of great benefit, large quantities of hot saline solutions acting as a powerful stimulant to the kidneys and emptying the bowels of poisonous toxins as well.

Venesection may be used to advantage in acute cases where the pulse is full and strong and the heart action good. The withdrawal from the circulation of from twelve to sixteen ounces of blood filled with poisonous toxins should be and is often followed by great improvement in the general condition of the patient. When in spite of all treatment the excretion of urea steadily diminishes, albumen increases, and the general nervous symptoms, such as headache, irritability, insomnia, etc., increase, and more especially if eye symptoms, due to beginning retinitis, appear, it is advisable to empty the uterus. For this purpose, I make use of the modified champetier de Ribes bags, which in my hands have proven of the greatest value, not only in the induction of labor, but also, when necessary, in accelerating it. The patient must be carefully observed during labor, for eclampsia is much more likely to come at this time, owing to increased nervous tension. Chloral should be administered in doses of 5 to 10 grains (as the severity of the case may demand) every 3 to 4 hours; and in the event of protraction of labor we advise early delivery by operative procedures. After labor, treatment should be continued for a period of several weeks at least, in order to thoroughly eliminate the toxins which have accumulated in the blood, and to restore to the normal, as far as may be possible, the various organs which have been responsible for the condition.

Felter says that aconite is always indicated when the pulse is small, frequent, and easily compressed.

*ON GOUT AND ITS TREATMENT WITH QUINIC ACID.**

By Drs. Huber and Lichtenstein.

The introduction of quinic acid by Weiss into the therapy of gout, which took place several years ago, aroused general interest at the time; for the results thus empirically obtained were susceptible of a rational explanation based upon the physiologic action of quinic acid. Weiss, as is well known, observed that the latter substance diminished the excretion of uric acid by the urine, and that it is also the active ingredient of certain fruits—such as strawberries—which, when eaten in large amounts, are able to reduce the amount of uric acid in the urine, and often, as we know by experience, exert a favorable influence upon gout. The rationalé of this action lies in the fact that the synthetic formation of uric acid is limited, because the benzoic acid, which is produced at the expense of the quinic acid, transforms the glycocoll, which is required for the synthesis of the uric acid, into hippuric acid.

Further studies, by various authors who have experimented either with pure quinic acid or some of its combinations, have led to divergent results. First in point of time, Blumenthal and Lewin, as a result of their experiments with sidonal (quinate of piperazin), confirmed the statements of Weiss. Blumenthal then studied the action of quinic acid when the excretion of uric acid was increased by feeding with thymus-gland, and came to the conclusion that the quinic acid had a marked action upon the uric acid thus produced. De la Camp found that in a leucemic patient, who excreted a great quantity of uric acid, the latter could be diminished in quantity by quinic acid and quino-tropin respectively. Bardet (*Bull. gen. de Therap.*, 1901, vol. 141, page 518) treated three gouty patients for more than a month with sidonal and noted constantly a diminution in the value of uric acid. Before the exhibition of quinic acid the uric acid amounted respectively to 0.96, 1.1 and 1.4 gm. (15, 17 and 22 grs.), while, after using sidonal with fourteen-day intermissions, the uric acid was finally brought down to 0.52, 0.8 and 0.61 gm. (8, 12 and 10 grs.) respectively. These figures lose somewhat in value, for in the earlier period of treatment constant pains were caused.

Next in order come the important investigations of Richter. He showed that, when pigeons were fed with bichromate of potash, uric acid deposits were formed; but that, if quinic acid was administered at the same time, this deposition of uric acid was always checked.

On the other hand, Lewandosky, Nicolaier, van Noorden, Ulrici and Foerster,[1] all obtained negative results in their experiments with quinic acid in relation to its power over the formation of uric acid; while Weintraub obtained inconstant results. In some of Foerster's experiments, however, a slight retarding action upon the formation of uric acid was noted in treatment with sidonal.

In regard to clinical experience, von Leyden was the first to report favorably upon the action of sidonal in gout. Several other authors wrote in corroboration of von Leyden's experience, and since that numerous favorable reports have been made concerning the action of sidonal in gout. Especial attention should be called to the fact that the very authors, who could determine no influence upon the formation of uric acid, recognized the favorable therapeutic action of quinic acid preparations. Thus von Noorden[2] states that, since the theoretical basis must be abandoned, one is forced to use practical experience as a measure of utility. The experiments were continued at von Leyden's clinic, and in order to form a better estimate of the action of quinic acid, the

* Translated from *Berliner Klin. Wochenschrift*, July 14, 1902, expressly for The American Therapist.

anhydrous acid was used under the name of new sidonal.

This substance has been used in five cases of gout, in daily doses of 10.0 gms. (150 grs.), throughout with good results, the pains either vanishing outright or becoming much less severe. Especially conspicuous was the result in a patient who experienced his first severe attack in a hospital. He received new sidonal for three days, during which the tenderness and swelling in the affected joint almost entirely disappeared. When the drug was discontinued, severe pains again appeared once more to vanish when the remedy was re-administered. Further, a patient, included in the Table, who had a high degree of gouty alteration in almost all of his joints, and whose attacks were both frequent and prolonged, under the administration of new sidonal pains became much less severe, so that the patient used to beg for the remedy. After repeated periodical application of new sidonal the attacks had wholly disappeared at the end of two months. The patient lived upon the ordinary diet of charity patients with meat.

We have further studied four patients with especial regard to the excretion of uric acid, as demonstrated experimentally by Weiss, Blumenthal, and others. The diet consisted throughout of the regular food of the charity hospital, varied but slightly in the case of meat, and with the addition of 1 or 2 litres of milk. The results may be summed up briefly as follows:

Case 1.—Gout. No attack for some time. From Dec. 10 to 16, alternating pains in shoulder and knee. Temperature constantly beneath 37° C. (98° + F.)

DATE.	AMOUNT OF URINE.	URIC ACID.	TREATMENT.
December 24,	1380 c.c. (46 ozs.)	.44 (7 — grs.)	None.
December 27,	1340 c.c. (44 + ozs.)	.44 (7 — grs.)	None.
December 29,	2310 c.c. (77 ozs.)	.57 (9 — grs.)	None.
December 30,	2230 c.c. (74 + ozs.)	.54 (8 + grs.)	None.
December 31.	2120 c.c. (70 + ozs.)	.57 (9 — grs.)	None.
January 1,	2250 c.c. (75 ozs.)	.28 (4 + grs.)	New sidonal, 10.0 gms. (150 grs.)
January 2,	2360 c.c. (78 + ozs.)	.29 (4 + grs.)	New sidonal, 10.0 gms. (150 grs.)
January 3,	2200 c.c. (73 + ozs.)	.32 (5 grs.)	New sidonal, 10.0 gms. (150 grs.)
January 5,	1820 c c. (60 + ozs.)	.29 (4 + grs.)	New sidonal, 10.0 gms. (150 grs.)
January 6,	2000 c.c. (66 + ozs.)	.36 (5 + grs.)	None.
January 7,	1300 c.c. (43 + ozs.)	.30 (5 — grs.)	None.
January 8,	Acute attack, evening temp. 37.5° C. (100° F.) Free from pain after two days.		None.
January 9,	2000 c.c. (66 + ozs.)	.76 (12 — grs.)	None.
January 14,	1640 c.c. (54 + ozs.)	.61 (9 + grs.)	None.
January 16,	2580 c.c. (86 ozs.)	.56 (8 + grs.)	None.
January 17,	2080 c.c. (69 + ozs.)	.49 (7 — grs.)	None.
January 18,	2015 c.c. (60 + ozs.)	.48 (7 — grs.)	None.
January 19,	2200 c.c. (74 ozs.)	.54 (8 + grs.)	None.
January 20,	2250 c.c. (75 ozs.)	.54 (8 + grs.)	None.
January 21,	2210 c.c. (73 + ozs.)	.46 (7 + grs.)	New sidonal, 10.0 gms. (150 grs.)
January 22,	2380 c.c. (79 + ozs.)	.37 (6 — grs.)	New sidonal, 5.0 gms. (75 grs.)
January 23,	2500 c.c. (85 ozs.)	.42 (7 + grs.)	New sidonal, 5.0 gms. (75 grs.)
January 24,	2360 c.c. (78 + ozs.)	.37 (6 — grs.)	New sidonal, 5.0 gms. (75 grs.)

In the figures in the preceding case is seen a marked action of quinic acid upon the diminution of the secretion of uric acid. The amount of the latter averaged for five days without medication 0.5 gms. (7½ grs.); while during four days, in which new sidonal was given, the average was 0.296 gms. (4 + grs.). The action was apparent at once. The highest figures during the new sidonal treatment were considerably below the lowest of the period before treatment. When the remedy was discontinued, the amount of uric acid once more increased. The average of the period subsequent to treatment was 0.52 gm. (8 grs.) for nine days. But here the first four days should be left out of the calculation, for on January 8th a slight gouty attack set in and lasted two days. If we reckon the average of the days,

January 16 to 20, which is 0.52 gm. (8 grs.), we see figures almost identical with those noted before treatment began. In the last days of the series new sidonal was once more given, but to a less extent than at first. Here again a distinct diminution in the excretion of uric acid was noted, although it was less marked than at first. The average value of uric acid was 0.4 gm. (6 grs.).

The uric acid value varies too greatly in diabetes for us to draw conclusions from the figures, although even here we may note a slight influence exerted by the quinic acid. The patient was treated with the latter for the sole purpose of ascertaining if it had any influence upon the excretion of sugar. In another diabetic patient we noted especially that the elimination of glucose dropped in 9 days from 100 gms. to 17 gms. (1500 to 255 grs.) under the exhibition of new sidonal, although the patient was not placed upon any strict diet. This positive result, however, appears to have been a mere accident, for in three other diabetics the results were quite negative. The method employed for the estimation of uric acid was the Hopkins-Woermer[3] process, using 200 c.c. (6⅔ ozs.) urine for each test. That the uric acid excretion was not affected by the appearance of other substances in the urine as a result of the ingestion of new sidonal, was shown by the fact that when 0.1 gm. (2 grs.) pure uric acid was added to this urine 0.0992 gm. (1.3 grs.) could be again recovered. Hippuric acid was determined in 3 cases by the Blumenthal-Salkowski[4] method.

If we consider all the foregoing researches together, it appears that quinic acid possesses a constant action upon the excretion of uric acid, invariably decreasing the quantity of the latter. Herein the remedy becomes indicated in gout, because we are no longer in doubt as to the chief part played by uric acid in the pathogeny of this disease. Although we do not know the essential nature of gout, nor its initial disturbances, we may be certain that it is connected with special alterations in the nutrition which lead to a saturation of the tissues with uric acid. The theoretical aspect is narrowed down to this question: Is the excretion of uric acid in the formation of tophi a primary phenomenon, or is it secondary to some necrotic change in the tissues, as Ebstein and Klemperer believe?

Freudweiler[5] and His[6] have shown that when uric acid or its salt is injected subcutaneously, a true gouty nodule is formed, having perfect anatomical correspondence with a natural lesion; and that these substances have a specific toxic action, which proceeds from a necrosis to an inflammation. Freudweiler has also shown by extensive investigations that, when the fluids of the body have their ordinary coefficient of uric acid raised, crystals of this substance are excreted in freshly inflamed tissue. No necrosis occurs, however, and the crystals deposited in the tissues are unable to attract uric acid from the blood, etc.

Freudweiler[7] comes to accept the Ebstein theory in full, save that he believes in a primary inflammatory process due to the acid without the intermediary of a necrosis. As the precipitation of uric acid in the tissues must be dependent upon the physical and chemical conditions which regulate solubility, we can understand why tophi form so readily in cartilage, for here, by reason of altered proportion of saline matter, the conditions for the solubility of uric acid are poor. Diminution in local alkalescence does not affect the solubility of uric acid, as may be shown by experiment. While it is not difficult to understand the formation of tophi, this is by no means the case with another phenomenon. When uric acid accumulates in the blood, no more of this substance enters the urine than when ordinary conditions are present. We may assume that the excess of uric acid in the blood so injures the kidney that it cannot excrete it, or that the acid itself is not in shape to be elim-

nated. The matter cannot be determined at present for one thing, because we do not know the form in which uric acid exists in the blood. Not only is the amount of uric acid in the body increased in gout, but its excretion is checked. During an attack of gout the excretion of uric acid is notably increased, although according to His the amount is diminished just before an attack. Other disturbances of the general metabolism have not been noted in gout.

If we now seek to answer the question, "Is it possible to explain the action of quinic acid?" we must start with normal conditions, for we know nothing of the special disturbances of nutrition which exist in gout. Uric acid formed during metabolism in mankind and other mammals is a specific decomposition-product, a derivative of nuclein and free purin bases.

According to the researches of Burian and Schur[8] the portion which proceeeds from the nucleins introduced with the nutriment must be distinguished from the portion derived from the decomposition of the purin-bodies in the tissues. This second portion, the endogenous, appears to have a pretty constant size for each individual, and is independent of the amount of food ingested. If uric acid is formed to some extent in all the tissues, the function of particular organs must have a great significance, especially that of the liver and spleen. Spitzer[9] was able to show that by means of extracts of the liver of cows and calves purin bases could be transformed to a considerable extent to uric acid. Similar results were obtained by Wiener. Various authors have also assumed the existence of a synthetic formation of urea. In birds and reptiles, which, as is well known, eliminate most of their nitrogen as uric acid, the latter is formed chiefly by synthesis dependent upon the integrity of the hepatic function. This synthesis corresponds to the formation of urea in mankind; while there is as yet no evidence of any synthetic formation of uric acid in mankind and the mammals. When Freudweiler[10] states that the synthetic formation of uric acid has been sufficiently proven by Nencki, Powlou and Zaleski, he does not accord with the facts. In the work cited (*Archiv f. experim. Pathol.*, Bd. 37) the question is not one of synthetic formation of urea. But in the action of quinic acid investigators have sought a support for a belief in the synthesis of uric acid (Weiss, Bunge). Proceeding from the fact that uric acid may be prepared from glycocoll and cyanic acid, it has been assumed that the benzoic acid which arises from quinic acid combines with glycocoll to form hippuric acid and thereby diminish the supply of uric acid. That the ingestion of benzoic acid has no influence over the excretion of uric acid must be explained by the fact that ready prepared benzoic acid need not possess the same action as that which is formed in the body itself, whether derived from benzoic acid or some other substance. While these possibilities cannot be proven offhand, there is no other evidence of synthesis of uric acid in the body. Other aromatic substances, which arise from the putrefaction of albumen and cause an increase in the amount of hippuric acid, do not possess any action which resembles that of quinic acid, as has been shown by the researches of Weintraub and Lewin.[11] If uric acid is formed synthetically it must be recognized as of endogenous origin. Burian and Schur have shown that the amount of uric acid of endogenous origin is quite constant for each individual; and it is a very singular coincidence that it is so independent of the nutriment if it could be produced synthetically. We must assume unconditionally that the endogenous formation of uric acid can arise only essentially from the breaking-up of tissue-nuclein. If, therefore, quinic acid can so notably retard the excretion of uric acid, as would appear from the experiments, this action

can be accounted for only by the destruction of nuclein.

In regard to the fate of the uric acid, we know that this substance, as a stage in the formation of purin bases, may be destroyed in the body. This appears with certainty from the fact that only a part of the purin bodies introduced in the nutriment are excreted as such, the remainder being destroyed in some other fashion. The destruction of ready-formed uric acid in the body, however, appears to be insignificant. Soetbeer and Ibrahim[12] have recently been able to show that uric acid, when injected subcutaneously, reappears *in toto* in the urine. Loewi[13] comes to the conclusion that uric acid formed intermediately is excreted without loss.

Before we enter into the range oj activity of quinic acid, the interesting researches of Ulrici[14] upon nutrition should be mentioned; for it appears therefrom that excretion of uric acid may be influenced pharmacologically and independently of the total metabolism. This is shown most distinctly when salicylic acid is exhibited. The excretion of uric acid is increased thereby 40 to 50 per cent., while the total N excretion is raised by 7 per cent. Especially important is the fact that the P_2O_5 excretion is increased only by 7 per cent., for it follows then that salicylic acid not only increases the decomposition of nuclein, but increases the formation of uric acid as a result of this decomposition of nuclein. If the cause lies in the disintegration of a larger quantity of nuclein, the P_2O_5, which comes from the latter, must be increased in the same measure as the uric acid. But the increased elimination of P_2O_5 agrees with the increase in the total metabolism of N; so that we can understand the increase in uric acid only upon the supposition that a large portion of the purin bodies, which pre-exist in the nucleins, is oxidized to uric acid. With this belief agrees the fact that Ulrici was able to show a connection between increase in uric acid and hyper-leucocytosis. We also know to-day that Horbaczewsky's theory as to the connection between the production of uric acid and the number of leucocytes is not correct, for uric acid may be increased without hyper-leucocytosis and vice versa.

In regard to the action of quinic acid, we have seen that we may not assume as an explanation a disturbance of the synthetic formation of uric acid. That it is not a simple retention of uric acid is shown by the favorable clinical results, and especially by Richter's investigations upon birds. We have determined by numerous counts that the quinic acid does not cause hyper-leucocytosis. There remains then only a possibility that uric acid is destroyed, or at least that less of it is formed. For the first possibility we have no data, for we have seen that according to recent investigations it is improbable that uric acid is destroyed in the blood to any palpable extent, as far as the human body is concerned. On the other hand, it is likely that quinic acid so influences the nutrition that when nuclein is disintegrated, in contrast to the normal condition, a small portion of the purin bodies is transformed into uric acid and for the most part destroyed. And as the formation of uric acid appears to be connected with certain organs, especially the liver, it is possible that a specific action is exerted upon these organs.

We have seen, therefore, that quinic acid has a theoretical justification for exhibition in gout, and that it has proved itself of value in numerous clinical cases. It is not asserted that we should expect a uniform result in all cases and, as a matter of fact, some investigators have not been able to demonstrate for quinic acid this property of diminishing the excretion of uric acid. Individual differences must come into play and we have no means of explaining them. Possibly quinic acid has a special analgesic action, as was assumed by Lewandosky and Klemperer. Quinic acid (tetra - oxybenzoic acid) is

closely allied to salicylic acid (monoxybenzoic acid), and it is therefore very probable that it possesses an anesthetizing, anti-neuralgic action.

The best method of administering quinic acid is in the form of the anhydrid (new sidonal), for the latter does not possess the sour taste of the acid. Combinations with so-called uric acid solvents, such as piperazin, etc., are not to be recommended to any extent, for we know to-day that such substances cannot exert this solvent action in the body, as His in particular has shown. If we bring the salt into combination with several bases, that salt is first precipitated which has the least solubility; and it is of no avail if bases are in proximity to uric acid, the salts of which are more readily soluble. Hence, as His says, the support of all similar claims gives way. Those who do not like to renounce the use of these solvents, however, are at liberty to combine them with new sidonal.

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12 *Zeitschrift f. phys. Chemie*, Bd. 35.
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14 *Ibid.*, Bd. 46.

Creosote.—Among the preparations of creosote, the carbonate seems the most effective. It can be given in large doses without producing gastric irritation or toxic symptoms of nephritis. It should be given in maximum doses (four drams a day, if it can be tolerated). Beechwood creosote is much cheaper than the carbonate; from 5 to 10 minims *t. i. d.* is the limit of endurance. It is best given in milk or oil; or a good menstruum is glycerin (1-3) and vini frumenti (2-3). Good creosote is very seldom found; poor creosote is likely to affect the kidneys and the bladder. This is an important consideration; for, in order to be effective, creosote must be given in large doses and during many months.—*Medical Critic*, August, 1902.

Ulcers of the Leg.—Cass Chenoweth (*Medical Record*, August 30, 1902) writes that the following is his treatment for ulcers of the leg: In ulcers not larger than a dollar I have the patient put the leg in hot water for an hour, then wash with soap and clean water, dry the leg, then wash with a weak formaldehyde solution, dry thoroughly and dust ulcer with boracic acid powder. Now I take strips of rubber adhesive plaster one-half inch wide, commence back of the toes, and apply tight, overlapping each lower strip, up to the knee, then apply an ordinary roller bandage. I allow this dressing to remain until the discharge shows through, which it will do in from five to seven days, and then the whole dressing is taken off and the ulcer cleansed as before, and a clean dressing applied. This will usually remain for about two weeks, when it is removed and the wound is dressed as before. These ulcers are generally well in six weeks' time. In cases in which the ulcers are larger than a dollar I send the patient to bed for two weeks, with instructions not to get up except to empty the bowels and bladder. While in bed I have the patient use a moist dressing of one ounce of boracic acid to one quart of water.

Unless the ulcer is very large, the two weeks' rest will reduce it so that it can then be treated as a small ulcer, but if two weeks is not long enough I keep the patient in bed two weeks longer, although this is very rarely required. As soon as the plasters are applied I allow the patient to follow his usual occupation. After the ulcer has entirely healed I have the patient wear an elastic stocking.

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Editorial.

ECLAMPSIA.

Were general practitioners questioned as to the two obstetrical conditions which they would prefer to dispense with in their practice, it is safe to assume that their answer would be eclampsia and placenta previa. Both of these are frequently so sudden in their onset, both are attended with such grave dangers to mother and child, that it behooves all physicians to use every possible effort at preventing such calamities. In his contribution on "The Toxemia of Pregnancy," Dr. GEORGE L. BRODHEAD lays special stress on prophylaxis, and calls attention very forcibly to the unsupported former belief that the quantity of albumen in the urine of a pregnant woman was the most important guide of the future possibility of an eclamptic seizure. We know now, as he has pointed out, that the "progressive diminution" of the quantity of urine excreted is a danger sign and calls for active measures of a hygienic, dietetic or operative nature. Hence the great importance of a regular and systematic examination of the urine in order to determine the amount of urea excreted in the twenty-four hours' quantity, as well as other chemical and microscopical factors. In the diminution of the quantity of urea in the pre-eclamptic stage, NICHOLSON sees a resemblance to hypo-thyroidism, and in the eclamptic attack an analogy to athyroidea. For these reasons he advises and practices the administration of the thyroid gland in such instances. The report of cases in which during an eclamptic attack a post-partem hemorrhage occurred, with resulting improvement, favors the adoption of venesection as a therapeutic agent of great efficacy in suitable patients. After all that has been said, however, the keynote of successful treatment in this and many other conditions is found in intelligent prophylaxis.

ANY METHOD of treatment which proves successful in a very large series of cases must of necessity have something of merit in it. Dr. L. R. MCCREADY, in relating his experience with picric acid and calcium sulphide in the treatment of gonorrhea, states that this simple treatment has cured over eight hundred patients in three years and that in his opinion these two drugs are the most active gonococcicides at our command. Doubtless there are many who, like ourselves, will question his results, particularly his cures, but his statements are on record and may be put to the test by the skeptical ones. We have had many occasions, in our recent issues, to discuss gonorrhea in its various phases, but none of the contributions have dealt with the subject as this one has. We submit the doctor's experience to our readers and should be pleased to hear from those who decide to give this method a trial.

HERPES ZOSTER is a condition in which certain rules, long heeded as fundamental, have been disproved. It is now no longer true that the affection is always unilateral, nor is it impossible for the zoster to occur twice in the same individual. Even the observation, that the vesicles are always limited to the nerve distribution, is not tenable, since TENNESON called

ur attention to the existence of "aber-ant vesicles," irregularly distributed over ne body. The presence of these vesicles vould seem to indicate that herpes zoster s, perhaps, a general disease of infective rigin, with a local manifestation. The ecent reports of herpes zoster, in which ne blood showed plasmodia, without any istory of malarial attacks, serves to trengthen the belief that this condition s a general rather than a local disease.

Any method of treatment which would end to ameliorate the disagreeable effects f ether anesthesia must be considered a tep forward. To overcome the distress-ng and irritative phenomena following therization, mentholization of the upper ir passages before, during and after therization has been so successful in the ands of Dr. W. A. Briggs that he has o hesitancy in recommending it for gen-ral use. Its advantages may be noted om our abstract of his article.

THERAPEUTIC NOTES.

Dermatol has proven of occasional enefit in fissured nipples.

Urotropin acts as an efficient urinary ntiseptic in cystitis.

One grain of bichloride of mercury to wo ounces of the tincture of delphinum vill usually cure pediculosis pubis.

In the diarrhea of childhood rice, bar-ey and albumen water serve as tem-orary substitutes for milk.

Ozone, given in inhalations of ten min-tes' duration three or four times daily, is onsidered by Delherm as specific for ertussis.

In senile pruritus with dry skin, pilo-arpine in doses of one-thirtieth of a rain, two or three times daily, affords elief.

Small doses of apomorphine relax the mucous membrane in laryngitis and bron-chitis.

In collapse of cholera infantum, a hypodermatic injection of ether, in addi-tion to hypodermoclysis and enteroclysis, will sometimes cause a rally.

Beta-naphthol and sulphur are useful drugs in the local treatment of pityriasis versicolor.

Trichloracetic and chromic acids are most commonly used for cauterization of the inferior turbinated bones.

When drug medication fails, irrigation of the bladder with a saturated solution of boracic acid often cures incontinence of urine.

Hydrochloric acid will remove the stains of methylene blue, while nitric acid will act in the same capacity for those of fuchsin.

An iodoform suppository (gr. ¾ to 1) will relieve painful ulceration of the rec-tum and vagina.

The taste of castor oil is covered by adding equal volumes of glycerin and aromatic syrup of rhubarb and a drop of cinnamon oil.

Erysipelas.—A. Schütze (*Deutsche Me-dizinal-Zeitung*, July 17, 1902) says that the most satisfactory agent for both local and internal use is ichthyol. This may be used in the form of a 10 to 50 per cent. solution in collodion, or 1 to 3 or 1 to 10 in vaselin, and applied thoroughly to the diseased areas and somewhat beyond. In his experience, ichthyol in glycerin 10,0 to 90,0), or ichthyol-vasogen, is effi-cacious in eczema and furunculosis, as well as in erysipelas. The local applica-tion frequently applied affords good re-sults; the anti-streptococcus serum does not offer very much relief.

Current Literature.

HEROIN.—A. Strauss (*Münch. medicin. Wochenschrift*, Sept. 9, 1902), in experimenting with this drug in his urological practice, found that one centigramme taken at night proved of great value in nocturnal pollutions of young men. In sexual neurasthenia often remedies had to be combined with heroin, while in acute and chronic gonorrhea with its painful complications a suppository afforded relief. In the painful erections following operations for phimosis, it acted better than sulphonal or bromides.

MENTHOLIZATION OF THE RESPIRATORY TRACTS IN ETHER ANESTHESIA. — W. A. Briggs is credited by *The Maritime Medical News* (May, 1902) with the following from *American Medicine:*

Mentholization of the mucosa of the air passages before, during, and after etherization has given me such satisfaction as to impel me to submit the method to the profession at large. The method is as follows: Sprinkle a dram of oil of peppermint or of saturated alcoholic solution of menthol in the cone; let the patient inhale of this freely for three minutes, then saturate the cone with ether and bring it down slowly over the face; after a few full inhalations crowd the cone down well and push the etherization as rapidly as is consistent with safety; continue the use of the mentholized cone through the whole period of anesthesia, replenishing the ether as usual. After the operation let the patient inhale oil of peppermint or menthol from a handkerchief freely and often until the tendency to nausea subsides.

The advantages of this over the usual method are the following:

1. Entire freedom from cough and sense of impending suffocation and comparative freedom from nausea, vomiting, and retching.

2. Ease and rapidity with which anesthesia may be induced, and the ease and smoothness with which it may be maintained.

3. The entire absence or marked abbreviation of the period of excitement.

4. Economy both of the ether and of time.

5. Profounder first anesthesia, under which minor operations may be done with more certainty.

6. Probably less post-operative nausea and vomiting.

SERUM TREATMENT IN BASEDOW'S DISEASE.—W. Goebel (*Münch. Medicinische Wochenschrift*, May 20, 1902) says: Exophthalmic goiter being due to hyper-function of the thyroid gland, the symptoms being due to excessive production of thyroidin, the treatment should consist in an effort to reduce the production of this organic iodine compound. As the thyroid glands are the only organs in which this substance is formed, the milk of animals the thyroid glands of which have been extirpated should contain no organic compound iodine, and therefore be useful in cases of exophthalmic goiter. The author then treated cases with the milk of thyroidectomized goats. One was so weak that she could not walk. In a few weeks she could do so, the circumference of the neck had diminished, she had gained in weight, the pulse was reduced to 90 beats per minute, all the subjective symptoms had disappeared, and some hard nodules that could be felt in the goiter also ceased to be noticeable.—*The Monthly Cyclopædia*, October, 1902.

THE SERUM TREATMENT OF ACUTE AND CHRONIC RHEUMATISM. — Dr. Menzel (*Die Therapie der Gegenwart*, July, 1902) concludes as the outcome of the bacteriological experience of over 100 cases of acute rheumatism, that the disease is the result of a streptococcus infection. Hence, he has directed his efforts to the cure of the disease by means of an acute streptococcic serum — streptococci obtained direct from the tonsils of a rheu-

matic-fever patient. The culture medium employed was ascites bouillon, and with this culture large animals were immunized in gradually increasing quantities. The serum obtained in this way is, theoretically, a protection against the ravages of the streptococcus. We say *theoretically*, for, of course, the whole therapeutic edifice is founded on the assumption that the malady is the result of streptococcus infection. Now, this serum, when injected in cases of chronic rheumatism of the joints, excites fresh acute inflammation, but has no such effect when the joints are healthy. Hence, the serum cannot be regarded as an antitoxin serum. When employed in acute rheumatism, the inflammatory symptoms are at first aggravated, and the temperature may mount higher than before. The author finds that the use of this serum tends to support, and indeed to hasten, the tendency of the organism to overcome the rheumatic toxin, and this it does, he believes, by the addition which this serum affords to the blood of anti-bacterial products. Chronic rheumatism by the employment of the serum again becomes acute, causing swelling and inflammation of joints, but this is quickly followed by absorption of the effused fluids and by rapid convalescence. Relapses, so common after salicylate treatment, do not ensue, but the healing process is progressive and continuous.

The author has treated twenty-five acute cases with good results, and chronic rheumatics, who for several months have been submitted with no good effect to other modes of treatment, have been greatly benefited. No unpleasant symptoms have been caused by the serum treatment. At the most, slight redness, with some glandular enlargement, has followed at the point of injection — the thigh. These symptoms have cleared up in a day or two, and have been of no serious import. The author disclaims all pretensions to having discovered a panacea, but he thinks that the results are distinctly satisfactory and that the method supports the organism in its efforts to overcome the disease. — *Treatment*, September, 1902.

Treatment of Scarlatinal Nephritis. — *The Medical and Surgical Monitor*, February 15, 1902, quotes from *The Medical Fortnightly* as follows:

Prolonged sweating or free purging are not advised when the kidney secretion is free. Elimination by the kidney route is best stimulated and kept free by the use of plain water. We have frequently added cream of tartar to the water with satisfaction.

If uremia threatens, then hypo-dermoclysis is practiced — using normal salt solution hot, and injecting a pint or more.

Enteroclysis may be practiced in an emergency, using the high rectal tube and irrigating fully a quart. To support the heart strychnia is advised, digitalis may be combined if used in small doses — in large doses it increases the tension of the pulse and is thus apt to irritate the congested kidney.

Hot packs may be used to promote sweating in uremic conditions, and especially when edema is a feature. If the headache is severe, persistent, and accompanied with nausea, calomel or galactose in small doses frequently repeated is indicated.

In brief, the treatment of nephritis is elimination, and during convalescence this must not be lost sight of. In addition, the anemia must be treated; iron, arsenic and strychnia in tablet form is a favorite prescription and can be taken for a long time. The bowels must be kept open, and to this end the salines, phosphate of soda or apenta water before breakfast is to be recommended. Proper warmth of the body should be maintained by the use of woolen clothing, and as long as albumin is a clinical feature, the patient must be kept in the house, in a temperature of about 72° Fahr. With the

disappearance of the albumin a certain amount of open-air exercise is advised and a well-regulated diet prescribed. The mineral waters, like Apollinaris or a home-made carbo-mineral water, to which is added lime-juice or lemon, should be used during convalescence.

Ulcers of the Leg.—"Gelatine paste," composed of gelatine, glycerin, zinc oxide and water, has been used. Softened by heat, it is painted over the limb and covered by a bandage. It should be allowed to remain undisturbed for several days, and is especially adapted to cases where there is an eczematous condition of the skin. Chronic eczema of the leg is often relieved by this application of gelatine paste. Zinc oxide ointment is very serviceable in these cases, smeared on the edge of the ulcer; unirritating, it forms a cake about the ulcer which should only be occasionally removed. Many ointments and lotions have been tried, stimulating, sedative, or neutral. Cleanliness, pressure, adhesive strips over the ulcer, flannel bandages supported by an outside rubber bandage are the keynotes. Remember that many a troublesome leg, ulcerated and eczematous, is made worse by ointments or lotions under oil-skin, or by poultices.—J. B. Anderson, *Medical Times*, October, 1902.

Burns and Scalds.—In an article on this subject, in *The Texas Medical News*, October, 1902, Dr. August Kuhn advises treatment as follows:

Constitutional.—Morphine should be given to relieve pain. Strychnia, digitalis, ammonia and caffeine to stimulate heart; also alcohol and hot drinks. For thirst, water and saline infusion would be of great benefit to overcome shock; also hot applications to body and extremities. Pilocarpine should be of benefit to relieve internal congestion and cause free perspiration.

Local.—Burns of the first degree may not need any treatment. In aggravated cases of this type applications of bicarbonate of soda, white of an egg, lead and opium water, sweet oil, vaseline, etc., may be applied. In second and third degree various applications are in vogue. Our first aim should be to exclude air and only a small surface should be uncovered at a time. Vesicles, if possible, should not be opened for several days. Carron oil formerly was used very much, but various other applications have mostly taken its place, such as ichthyol, carbolic acid, boric acid, aristol and other ointments. Unguentine is a favorite with many. Continuous warm baths are highly recommended; also turpentine applications. Dry dressings, too, are extensively used, as bismuth, boric acid, aristol, zinc oxide, iodoform and other preparations. With either dry or moist dressings parts should be well protected by sterile gauze and absorbent cotton. Dressings should not be changed too often, say every two or three days, except there should be too much discharge. When large surfaces are involved skin grafting should be resorted to, after the acute stage is over.

Carbonic Acid Gas.—Dr. G. E. Malsbary (*Virginia Medical Semi-Monthly*, August 22, 1902), in an article on the Resumé of the Treatment of Tuberculosis, remarks: Carbonic acid gas was used by Weber in the treatment of tuberculosis under the assumption that this gas is the agent used by nature to protect the lungs against the bacillus tuberculosis. Support is lent to this view by the well-known fact that diabetes seems to favor the development of tuberculosis, for, according to Ebstein, there is a defective development of carbonic acid gas in diabetes. The apparent improvement of tuberculosis often observed during pregnancy has been attributed to the increased production of carbonic acid gas due to the presence of the fetus. With the expulsion of the fetus the carbonic acid gas is reduced in amount and the tubercle bacillus grows more readily.

Heart disease that produces hyperemia of the lungs, and thus causes a comparative increase of carbonic acid gas, seems to confer a certain immunity to tuberculosis. Emphysema gives a similar immunity. It is stated that workers about lime-ovens are comparatively exempt from tuberculosis. These considerations led Traube to try to cause the formation of carbonic acid gas in the stomach in the treatment of tuberculosis. To that end he recommended his patients to take, half an hour before meals, twelve drops of hydrochloric acid in a glass of water, followed by a teaspoonful of sodium bicarbonate. Under this treatment improvement was noticed even in severe cases. Later Traube gave the following, half an hour before meals:

Aquæ aurantii floris ..... } āā 20.0.
Acidi hydrochloridi. ..... }

M. S. gtt. 25 in a glass of water three times a day.

This was followed by—

Ferri oxidi saccharat. solub 20.0
Sodii bicarbonatis.....100.0

M. S.—A heaping coffeespoonful three times a day, in a cup of cold, previously boiled, milk.

The Brand Bath. — Frank L. Adams (*Pacific Medical Journal*, June, 1902), in a lengthy article on hydro-therapy in typhoid fever, describes the technique of the bath as follows: The patient is given a stimulant, either whiskey and water or a cup of hot broth, and then stripped. The face is quickly sponged in ice water, and the patient is then gently lifted by two assistants and lowered into the tub; under no circumstances is it permissible for the patient to walk to or from the bath; every part of the body except the abdomen should now be vigorously chafed and rubbed. Rubbing along the spine and back of the neck will often relieve the feeling of cold and shivering, while chafing the legs will either prevent cramps and pains or greatly relieve them. If there be a decided chattering of the teeth or cyanosis of the face, the bath should be discontinued at once. Several times during the bath, water at a temperature of 50° Fahr. is poured over the patient's head. By wrapping a towel around the head we may prevent the water passing over the face and add greatly to his comfort. After the patient has been in the bath ten to fifteen minutes he is removed to his bed, which has been prepared in the following manner: A double blanket is placed upon the bed and over a pillow which is covered with a double thickness of crash toweling; over the blanket is spread a sheet, preferably of linen, on account of its better powers of absorbing moisture, and at the foot of the bed several hot water bottles are placed. The patient is lifted into his proper place and wrapped with the sheet in such a manner that the arms and legs do not come in contact with wet surfaces. The blanket is then thoroughly wrapped over the entire body, and if the rectal temperature has been 103 or over, he is allowed to rest five or ten minutes; if not, he is immediately rubbed dry and warmly covered. It is now often advisable to give hot whiskey or hot broth. If shivering is prolonged and reaction slow in coming on, it indicates that the temperature of the bath is too low or that the bath has been used for too long a period. Careful notes should be taken and the next bath regulated accordingly. Brand advises the bath when the rectal temperature is 102.5, and its repetition every three or four hours when necessary. The rectal temperature is taken one-half hour after the bath is finished, and again in one-half hour, when it is often found that there has been a fall of two or three degrees. When, in severe cases, the fall is only one degree, it is advisable to prolong the bath to twenty minutes, or reduce the temperature of the water. In light cases it may not be necessary to give the bath more frequently than every four or six hours. It is advisable to permit the patient to sleep during the night for six or eight hours when possible. High

temperature is not of itself the gravest symptom of typhoid, as we all have observed cases in which the temperature remains high, and yet in other respects the fever pursues a mild course. However, when the temperature remains high for a long time, or when it suddenly becomes very high, it is necessary to take active measures to reduce the temperature.

Strumpell says: "The early appearance of stupor and delirium in a given case means that for that patient the fever is high and should be treated." The rapidity of emaciation, the respiration, the pulse and condition of the heart, and the nervous symptoms may be more important guides than the temperature in the treatment of a given case.

Migraine.—Potts advises rest in bed in darkened room, stomach lavage with hot water or drinking large amounts of hot water; after this a saline cathartic or a teaspoonful or two of Carlsbad salts, aided if need by a hot soap and water enema; antipyrin, acetanilid, caffein, salicylates, or ergot may be tried; mild galvanic current to head and static sparks sometimes of benefit; remove all possible sources of reflex irritation, and exclude from diet red meats and all easily fermented articles; cannabis indica long continued to tolerance most successful drug—may be combined with arsenic or in case of a gouty diathesis with ammonium salicylate; sodium phosphate or Rochelle salt before breakfast also of service; avoid excessive mental and physical strain, and lead regular outdoor life.—E. C. Hill (*Medical Standard*, Feb., 1902).

Urticaria and Scabies. — Dr. M. E. Fitch (*The Medical Times*, August, 1902), in speaking of skin diseases in children, says: Urticaria is a common disease in children, and in them differs from the same condition found in adult life, for associated with the wheals are seen papules and vesicles. This has caused considerable confusion in diagnosis. This is due to the fact that children are much more susceptible to the disease and the process is much more active, so that instead of wheals are formed inflammatory papules or vesicles. There is with this severe itching, followed by insomnia. At times it is hard to diagnose this condition from scabies, or other cases may resemble varicella. It is almost always caused by some trouble in the digestive region. This is one of the most difficult conditions of childhood to treat, for in the first place, it is necessary to build up the child's system. It is well to put such children upon a milk diet, the bowels must be kept freely open and the urine should be examined, and if scant, diuretics should be given. Then the physician must search for all local causes of irritation, such as rough underclothing, too tight bandages, etc. The local irritation can be relieved by some soothing application, such as subacetate of lead, or carbolic acid, or by the familiar household remedy, weak dilutions of vinegar. Frequently changes of air and location will be required before the patient recovers the usual health. Formerly scabies was quite a prevalent disease, and is still so among the poorer classes of Italians and Jews. It is rarely seen upon the face except in extreme infancy, and the lesion exhibited by the acarus is generally a papule or vesicle. The burrow is from ¼ to ½ inch long and looks like a fine black line, with the acarus at the end looking like a white spot. It is sometimes difficult to find these burrows in children, but they generally can be found along the inner border of the hand and down between the fingers. The intensity of this lesion may be at times very great, so that the general condition of the child seems to be seriously impaired. The use of a lens is frequently necessary to divulge the characteristic burrows and acarus. The first thing to be done is to give the child a hot bath to soften the scabe from the burrows.

The child should be thoroughly scrubbed with soap and water for at least one-half hour. Then the body may be anointed with the ointment selected, which should be left on over night. This treatment should be repeated for several nights in succession. As a rule, ordinary sulphur ointment, which is sufficient for adults, will not do for infants, and some such ointment should be used as

Precipitated sulphur	1 part
Balsam of Peru	1 part
Vaseline	8 parts

Or,

Naphthol	15 parts
Prepared Chalk	10 parts
Vaseline	100 parts

It is well also afterward to apply some soothing application.

Euphorbia Pilulifera.—In asthma the value of euphorbia pilulifera in a large percentage of what are recognized as chronic asthmatic cases is not generally known to the profession. In order to further the good work it is suggested that this remedy be given a trial. The dose is from twenty to thirty drops in water, and where indicated, the iodide of potassium may be combined with it—five grains to be given with each dose of the euphorbia. There are some objections to its use, among which should be mentioned the fact that some patients cannot take it, and as the coloring matter affects the kidneys, it should be given with caution when these organs are diseased. The most flattering reports have been published relating to its therapeutic value, not only in this country.

Euphrasia.—Brose S. Horne (*The Cincinnati Lancet-Clinic*, September 6, 1902) makes the following interesting statements :

The plant euphrasia officinalis was used by the ancient physicians in the form of a decoction for ophthalmia. It is supposed to have derived its name, "eyebright," because it rendered the vision clearer. There can be no question but that this most worthy drug has been neglected by the great mass of physicians, as have many others in the vegetable kingdom.

J. B. Enz, in 1859, made some investigation of this plant, but his work was mostly along the line of an attempt at chemical analyses, in order to isolate some active principle, which attempt, as a rule, is evidence in itself that the therapeutic action of the plant was not properly studied.

The plant can be found in the United States in the White Mountains and near Lake Superior.

This drug is a sanitary agent, for if a good preparation is used, the annoying symptoms that so freqently follow measles can positively be prevented by small and frequently repeated doses of an extract made from the fresh plants.

Eyebright is a superior remedy in all catarrhal inflammations of the respiratory mucous membranes. In treating coryza we find a great many authorities who seem to imagine that nothing is of any value but belladonna or its alkaloid, atropine. Out of forty-three cases of acute coryza treated with euphrasia there was not a one but what was relieved after a fair trial with this drug. One noticeable feature was that the patients did not complain of that extreme dryness of the nose, mouth and throat that belladonna produces.

The writer suffered a number of times while at Michigan City, Ind., on the lake, with an irritation of the nose and throat, commonly called "snuffles," and his attention was attracted to the great virtue of this remedy by obtaining speedy relief after taking the same. It has a special affinity for nasal and lachrymal mucous membranes.

Persons who have frequent attacks of acute coryza, and especially those cases where the discharge is thin and watery and burns the nasal passages, will obtain relief if given twenty drops of euphrasia every hour or two. Often individuals who have an attack of coryza from a mechanical cause have failed to receive

relief from the cocaine spray and all other treatment, but as a last resort received permanent relief from using this remedy.

The direct indication for euphrasia is in irritating catarrhal diseases of the upper respiratory tract. When the discharge is thin and watery, the fluid runs from the nose clear and burns the surface, the brow pain is relieved and the determination of blood to the parts is overcome by this agent.

This remedy has a peculiar action, in that it gives relief and the patient is at ease from the difficulty; the secretions, or, better, the over-amount of excretion, is checked, but not as with belladonna, where extreme and annoying dryness takes the place of the nasal flow, or one disease or symptom is substituted for another.

The dose is from ten to sixty drops of the fluid extract. Caution should be used about whose product is obtained, of course.

Treatment of Ulcer of the Cornea.— Drs. Casey A. Wood and Thomas A. Woodruff (*Medical Standard*, Sept., 1902) say that one drop of one per cent. solution of atropine sulphate should be instilled into the conjunctival sac at once and continued once or twice daily, or often enough to keep the pupil dilated. The application of hot water (as hot as can be borne) should be kept up from every one to three hours depending upon the amount of inflammation and pain present. This should be followed by washing out the conjunctival sac with a mild antiseptic lotion: boric acid solution, 3 per cent.; solution hydrarg. bichlorid, 1 to 10,000; solution permanganate of potassium, 1 to 4,000, etc. The eye should not be bandaged, but covered with an eye shade, a piece of sterilized gauze being placed between the eye and the shade. The cornea and conjunctival sac should be carefully examined, foreign bodies should be removed, and diseased lids treated with appropriate remedies. Tonics and other proper remedies should be given when the general health is at fault.

Actinomycosis.—

℞ Sulphuris sublimati ..... ʒ iv
Acid. salicylatis ..... ʒ i
Vaselini..... ʒ iv

M. Sig. Apply as a dressing.

—M. M. Burnett, *Wichita Med. Journal*, September, 1902.

Local Treatment of Acne. — Burnside Foster (*Northwestern Medical Journal: Journal of Advanced Therapeutics*, July, 1902) states: When comedones are present in large numbers, and the skin is thick and grayish, with little suppuration, thorough scraping with a dull currette is of the greatest service. The skin should first be thoroughly disinfected and, after the operation, washed with very hot water and soap. Sulphur-camphor-balsam-of-Peru soap is one of the best. At home the patient may apply a mild sulphur cream or powdered sulphur during the night. If there is much suppuration the pustules should be opened with an acne knife, under strict antiseptic precautions, and their contents evacuated; squeezing without preliminary incision leaves a worse scar than when the knife is used. If there is much hyperkeratosis, and the patient's consent can be obtained, an ointment consisting of resorcin and zinc paste, equal parts, may be applied constantly to the skin for four days. At the end of this time the skin is washed with starchy water, and cold cream or glycerin jelly applied. The skin peels off in large flakes, bringing away the horny layer, and in a week the improvement is very marked. This treatment is of course temporarily disfiguring, and compels the patient to retire from view for ten days. A novel remedy suggested for cases with excessive oiliness is gasoline; it removes the fatty matters and diminishes the amount of secretion of the sebaceous glands. Electricity may be used either to remove deep-seated papules by the in-

troduction of the needle attached to the negative pole, a weak current being passed for a few seconds, or in the form of surface galvanism, applied fifteen minutes at a time, to stimulate cutaneous circulation in cases characterized by a thick and anemic skin.

Pneumonia Complicating Phthisis.— Dr. Karl von Ruck (*Journal of Tuberculosis*, January, 1902) says: Until several years ago I had much faith in the administration of one or two full doses of quinine (10 to 15 grs.), and while I still believe its use to be valuable, I have for the present abandoned it in favor of full doses of creosotal, which has appeared to have a decided influence in diminishing the ordinary duration and in bringing about resolution of the pneumonic process. My experience extends now over upward of twenty cases, in none of which the pneumonic area progressed to caseation, as is so apt to be the case in pneumonias complicating pulmonary tuberculosis, especially if the inflammatory area is already the seat of tubercle. This may be, of course, a fortunate coincidence, and I would still consider it so were it not for the favorable results reported by various clinical writers in other forms of pneumonic inflammation.

The Abortive Treatment of Carbuncle. —*The Monthly Cyclopædia of Practical Medicine*, August, 1902, abstracts the following: A 2-per-cent. carbolic-acid solution is employed. The injection is made with an ordinary hypodermic syringe, using a good-sized needle. The needle is entered at an angle of about forty-five degrees, and is so placed as to be about midway between the softened area in the center and the indurated margin. It is carried to the center of the infection just below the skin. In some cases a fistula leads to the suppurating focus, this marking the center of the carbuncle. One-half the contents of the syringe is injected, when the needle is withdrawn and again entered on the opposite side in the same manner. The remaining contents of the syringe, when thrown into the already distended tissues, commonly escape along the track of the previous puncture, or the fistula if one exists. The injection is usually followed by some pain and a slight increase in the swelling. In a few days the carbuncle shrinks to a small, indurated mass, which soon disappears. A number of case histories are given, which show that the infection is curtailed. (A. Bidder, *Deutsche mediz. Wochenschrift*, May 1 to 8, 1902.)

Cerebral Hemorrhage. — Wm. Browning (*N. Y. Med. Journal*, February 15, 1902) directs attention to the following important facts:

Don't give stimulants. Their use in such cases is most reprehensible. So often we see them freely given, notably the alcoholic. The patient is prostrated, and the lay mind naturally turns to tonics and bracers—about the worst thing that can be done.

Don't resort to saline injections. During the acute stage a limitation of fluids is in order.

Don't use the depressant diaphoretics, such as ipecac, pilocarpine, or apomorphine. They tend to nauseate, an inclination otherwise too common, and, in the degree of attempts at vomiting, most undesirable.

Don't prescribe digitalis. I have repeatedly seen it bring on another attack. It is a dangerous drug in any individual with a liability to apoplexy, and for this, if for no other reason, of questionable utility in nephritics. Where anything of the sort must be used, strophanthus is in my experience far safer.

Don't resort to opiates. They are likewise contra-indicated.

Don't try nitrites, as their use in any form is here out of place.

Don't permit any muscular exertion on the patient's part; and moving by others should be limited as much as possible.

SELECTED PRESCRIPTIONS.

ASTHMA.—

℞ Strychninae sulphatis.....gr. ¾
Hyoscinae hydrobromatis.....gr. ⅙
Morphinae sulphatis .....gr. vi
Sodii bromidi ..... ʒ vi
Liq. potassii arsenitis ..... ʒ ii
Tinct. digitalis .. .. ℥ ss
Infus. gentian. co.....q. s. ℥ vi

M. Sig. ʒ ij q. 3 h. —ESHNER.

MIGRAINE.—

℞ Antipyrine,
Potassium bromide .....āā gr. viiss
Cocain hydrochlorate..... gr. ⅙
Caffeine ..... gr. ⅓
Guarana powder ..... gr. ivss

M. Sig. One cachet at the beginning of the attack. —ROBIN.

MOSQUITO BITES.—

℞ Ol. picis liq.,
Ol. olivae.....āā ʒ vi
Ol. hedeomae .... ℥ ss
Spir. camph..... ʒ iij
Glycerini ..... ʒ iiss
Acidi carbolici ..... ʒ i

M. Sig. Apply on retiring.
—MANQUAT (*Journal A. M. A.*)

LUPUS.—

℞ Acidi salicylici,
Sol. antimonii chloridi .....āā ʒ i
Creosoti,
Ext. fl. cannabis Indicae .....āā ʒ ij
Lanolini ..... ʒ ss

M. Sig. Apply locally.
—UNNA (*British Medical Journal*).

ARTERIAL TENSION.—

℞ Potassii bicarb. ..... gr. xxviij
Potassii nitrici ..... gr. xviij
Sodii nitrosi..... gr. ivss

M., ft. pulv. No. j.

Sig. In a tumblerful of water every morning.
—LAUDER BRUNTON.

FLATULENCY.—

℞ Saccharin. ....gr. i
Pulv. carb. ligni,
Bism. subnitr. .....āā ʒ ij

M., ft. chart. No. xij.

Sig. One powder half hour before each meal.
—*Maryland Med. Journal*, June, 1902.

RHEUMATISM.—

℞ Tinct. of camphor,
Tinct. of opium,
Spirit of ammonia .....āā ℥ i
Olive oil..... ℥ ij

M. Sig. Apply as liniment.
—DUNGLISON.

MIGRAINE.—

℞ Sodii sulphocarbolat.....gr. v
Potassii permanganat.,
Betanaphthol .....āā gr. j

M. Ft. caps. No. i. Sig. One after each meal.
—W. H. THOMSON.

Thyroid has been found useful in some cases of ununited fracture.

Book Notices.

THE PUBLIC AND THE DOCTOR. By a Regular Physician. Published by Dr. B. E. HADRA, Dallas, Texas.

It is a pleasure to read this little volume, which, to put it mildly, is interesting and instructive. Its pages are well written and abound in facts which, if more generally known by both layman and physician, would serve to elevate the profession to a still higher standard and "enhance the good-fellowship and confidence between client and physician." There is need for a word of this kind in these days, when the regular practitioner is so little protected by the existing laws, and we express the hope that it will have the wide circulation it deserves.

We are pleased to acknowledge, with thanks, the receipt of the following reprints by CARL BECK, M.D., of New York City:

The Pathologic and Therapeutic Aspects of the Effects of the Röntgen Rays.

The Röntgen Rays in Differentiating between Osteo-myelitis, Osseous Cyst, Osteo-sarcoma and other Osseous Lesions.

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A MONTHLY RECORD OF MODERN THERAPEUTICS,

WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

VOL. XI. NEW YORK, JANUARY 15, 1903. No. 7.

Original Articles.

A SUBSTITUTE FOR SKIN GRAFTING.

By DR. J. LINDSAY PORTEOUS, Yonkers, N. Y.

In 1879, Dr. D. J. Hamilton, Pathologist to the Royal Infirmary, Edinburgh, published a paper "On the Process of Healing," in which he showed experimentally and otherwise that the vessels of a granulating surface are not newly formed, but are simply the superficial capillaries of the parts which have become displaced. They have been thrown upwards as granulation-loops by the propelling action of the heart, because the restraining influence of the skin has been removed. One of the great functions of the skin is to counteract the tendency which the superficial vessels have, to be pushed outward, and a similar restraining action is conferred upon the deeper branches of the fasciæ which surround them. These hold the vessels in their proper places and overcome the tendency which there is to peripheral displacement.

When Dr. Hamilton was collecting information for this paper and studying the organization and healing still further, he remarked the great similarity of the power of vascularization as seen in a granulating surface and that which occurs when a blood-clot or fibrinous exudation is replaced by a vascular cicatricial tissue. Believing that a blood-clot or fibrinous lymph, before organization takes place, is so much dead matter in a tissue, the thought suggested itself to him that *any* dead porous animal tissue, in course of time, would be vascularized and replaced by cicatricial tissue. After some reflection Dr. Hamilton chose sponge to give practical demonstration of his theory, because it is a porous tissue, and in this respect would imitate the interstices of the fibrinous network in a blood-clot or in fibrinous lymph. Secondly, that it is an animal tissue, and like other animal tissues, such as catgut, would, if placed under favorable circumstances, become absorbed in the course of time. Thirdly, that it is a pliable texture and can, consequently, be easily adjusted to any surface, or cut into convenient size to be placed in a cavity. Dr. Hamilton relates five cases treated in the year 1880 with this substance, four of which were successful, but the fifth was not.

One case was a large circular ulcerated wound on calf of leg, 5 inches in diameter and from ½ to ¾ inch deep.

The *second* case was a wound caused by the excision of an epitheliomatous tumor in the lower jaw.

The *third* case was that of an intractable ulcerating wound of old standing on the left leg.

The *fourth*, a case where a recurrent cancer of the mamma had to be excised, necessitating the removal of a large portion of the surrounding skin, and dissecting the parts close down to the ribs.

The *fifth* was unsuccessful. It was a case of an old necrosis of the lower end of the tibia communicating with a wound of considerable size. At the bottom of the wound was the exposed and apparently dead extremity of the bone, while the surrounding parts had an unhealthy and somewhat sloughy appearance. There was no granulating surface. All this was unfavorable, simply because the parts

* Read before Westchester Medical Society.

could not furnish sufficient embryonic tissue to pierce into the sponge and to organize it, no underlying blood vessels to penetrate into its interstices.

Early in 1882, I had a case which I thought might be a fair test for the innovation. It was one of a callous ulcer of 22 years standing, involving about 6 inches by 4 inches of the calf of an elderly woman's leg. It was fully one-half an inch deep, with thick edges and a smooth, bluish surface. There was no granulation, and although many times blistered and strapped, it would not heal. I painted the surface with liquid blister, and when that had caused a so-called raw condition I applied a sponge, and had the satisfaction of having that ulcer entirely healed in six or seven weeks. This case I published at the time. Subsequently I was successful in several similar cases. The following is an accurate description of the most recent case I have treated.

W. G——, age —, was burned on May 5th on both feet by a hot-water bag. The left foot was burned along the outer side and also on the heel, but with the exception that the heel was only slightly injured. The right foot from the toes to the ankle was badly burned, the parts sloughing and coming away. Before I saw the case soda had been applied, also carron oil with carbolic acid in it. The usual treatment for such injuries was adopted and continued until June the 18th. The wound seemed to remain exactly in the same condition up to this date. No volunteer coming forward to enable me to perform skin grafting, I determined to fall back on what has several times helped me before, namely, sponge grafting I procured a fine sponge, and having removed all siliceous and calcareous salts and rendered it aseptic, as also the wound, I carefully adjusted it to the parts. I then covered it with protective tissue, and covered this with lint soaked in $^1/_{20}$ solution of carbolic acid in glycerine, and this with a pad of boracic lint and a bandage. The following day I found a considerable amount of purulent discharge but no odor. I dressed it as before. Four days after the application of the sponge, I found it adhering at the edges and flattening in the centre and infiltrated with blood and new tissue. Removing a small portion from the surface of the centre, blood oozed out. The process of clipping out the portion of sponge gave no pain, showing that as yet nerves had not found their way into the new mass. By the tenth day the sponge seemed to be quite adherent all over the wound, and when touched rather roughly it bled. The discharge from the wound was quite copious and of pale color, but kept entirely free from odor. The sponge, as soon as it became vascular, filled with embryonic cicatricial tissue and gradually disappeared, leaving a rather hard mass of tissue, without any contraction. By July 30th the hardness had disappeared and the part felt soft and natural.

Dr. Hamilton relates a very interesting case which came under his notice while experimenting. It was that of a recurrent mammary cancer. In excising the tumor the surgeon found it necessary to remove a large portion of skin and dissect the parts close down to the ribs. Consequently a large gap was left which he filled with sponge. Ten days after the operation the sponge was vascular; there had been a little serous discharge, but the wound and discharge remained perfectly aseptic. When the sponge became vascular it rapidly filled with embryonic cicatricial tissue, and at the end of six months it had entirely disappeared, and nothing remained but a granulating surface of small size, partially covered by a pellicle of epithelium. In place of the sponge was a hard mass of tissue. Thinking that this new-growth mass had been penetrated by cancer tissue, he clipped out a small portion covered by a blue pellicle of young epithelium and had it examined. As in the case I have mentioned there was no pain in clipping it out, showing that the nerves had not found their way into the new mass. Some

sections were made of the clipping, both when fresh and after being placed for forty-eight hours in Muller's fluid. Under 300 diameters the keratode framework of the sponge was seen, while adjacent to it was the embryonic connective tissue which had filled the interstices and surrounded the framework. The surface of the new tissue was covered by a layer of epithelium with a complete germinal layer. The epithelial cells, as so often happens in healing wounds, presented well-marked serrated edges. The whole of the sponge interspaces were filled with what generally would be called connective tissue cells—but the most remarkable thing was, that there were an extraordinary number of very large giant cells which lay in the same situation.

Dr. Hamilton states that in nearly every instance in which he had an opportunity of examining an excised portion, the giant cells were present in great abundance, whatever the actions of these may be in organizing tissue.

Some of the experiments made by Dr. Hamilton were extremely interesting. A sponge was placed in the abdominal cavity of a dog, and after ten days the dog was killed. There was considerable peritonitis, as is usually the case in experiments on the peritoneum of the lower animals, chiefly on account of the difficulty of avoiding septic contamination. The sponge was adherent to a loop of intestine. The union was so firm that it was difficult to remove it. There was a considerable amount of fibrinous lymph, but the part of the sponge not attached to the intestine was only partially covered by it. The greater part of the unattached surface was still quite porous and did not present any evidence of organization. After hardening a portion of the sponge with Muller's fluid, it was cut into and a layer of dense newly-formed tissue at the attached edge of the sponge about a quarter of an inch thick was found. The rest of the sponge was porous and not much altered.

In all the experiments the first thing noticed was the infiltration of the interstices of the sponge with a certain amount of fibrinous lymph. The canals did not seem occluded by it, but fibrin with entangled leucocytes was found adhesive to the sponge framework. Cicatricial tissue gradually invades the apertures of the sponge, and subsequent to this displaces the fibrin and destroys it. If a section is made of the interior of such a sponge, two distinct areas are seen. The internal is the part which has been in the first instance filled with fibrinous lymph, while the other, the external, is that which is becoming pervaded with cicatricial tissue. The sponge framework is infiltrated with fibrinous lymph while the area within is the organization layer.

The cicatricial elements grow into the sponge in the form of a distant layer, springing from the intestine or the tissue to which it had been attached. From the attachment blood vessels also arose, which along with the cicatricial elements were the means of bringing about the organization.

In support of the theory that the blood vessels were pushed into the sponge as loops, a significant phenomenon can be seen, namely, that where the convexity of a loop comes in contact with the framework of the sponge instead of one of its pores, a curvature formed on the vessel at the opposing point similar to that from which both had arisen From this we deduce that the sponge became part vascular.

I have already taken up too much of your time in theorizing, and will now make a few remarks in conclusion regarding the advantages of this mode of wound healing. We cannot compare skin-grafting to sponge-grafting, as no one for a moment would say that the process of repair which takes place where living epidermic cells are placed on a vascular surface and simply nourished by it so that they continue to live and grow, is the same process as is gone through in

sponge-grafting, which acts merely as a framework on which organization may take place—nor is it identical with sponge eduction, as in this method sections of sponge cut across the tubes are applied and kept moist, but removed before they become too firmly attached for the purpose of encouraging granulation, and are not meant to be absorbed.

I have already stated why sponge is the best dead tissue to use. Charcoal and calcined bone might also be utilized in cases where a strong framework was desirable in order that contraction may be avoided—but in the cases in which I have made use of sponge, such as burned tissues near a joint, and where there is often considerable contraction if skin-grafting is performed, I have found little or no contraction where the sponge was used. It should only be applied where a vacuity is to be filled. Hamilton's experiments have shown that if it is forced between two portions of a muscle, without a portion of the muscle excised, organization does not proceed nearly so equally as where a piece of tissue is removed and the sponge takes its place. The reason of this is obvious, as it merely presses against blood vessels and obstructs circulation, causing inflammation. Finally, to be successful with this treatment, asepsis must be rigidly enforced. The wound must be made thoroughly aseptic, also the sponge. There is no reason why a patient should not be allowed to move about if practicable, after the sponge is firmly fixed, which will be about ten days. I have found, however, that some parts of a sponge become organized more quickly than others. This the surgeon must carefully watch, as, if too free movement is allowed before the whole sponge becomes organized, bleeding is apt to take place, which is to be guarded against.

The process is a long one, but, in my opinion, the results far outweigh the disadvantage of delay. I should strongly advise any of you who have an intractable ulcer or much loss of tissue, especially near a joint, to give this process a careful trial.

*OBSERVATIONS ON THE TREATMENT OF PNEUMONIA WITH CREOSOTAL.**

By James J. Philips, M.D.
District Physician of the Good Samaritan Dispensary, New York City.

I submit for your consideration this evening my experience with the use of the carbonate of creosote in the treatment of pneumonia.

The introduction of the drug itself and its application to pneumonia, both, are of recent date. Creosote has long been used and is to-day probably the best medical agent we possess in the treatment of certain pulmonary conditions (I refer to tuberculosis, to chronic bronchitis, to localized areas of *persistent* dullness and râles), but being caustic it can be given only in small doses. The tolerance of the stomach and gastro-intestinal tract is soon reached. In the search for a form of creosote, less irritating, the carbonate of creosote was evolved. This was at first a laboratory product, simply manufactured for local consumption, and for general clinical purposes naturally difficult to procure, and it was only after much persuasion that a sufficient quantity could be secured from Prof. von Heyden's laboratory in Berlin to carry out in Paris a series of experiments in tuberculosis in the year 1894.

These experiments demonstrated, 1st, that the drug was *admirably* well borne; 2d, that creosote could, in this form, be given in quantities formerly believed to be impossible. Both observations were important advances.

With such an introduction to the profession came its trial, not alone in chronic but in *acute* affections of the lungs as well, where its favorable action became more manifest, and in a still more striking manner. Shortly came the observations of two French physicians, Cassouté and Corgiér, in Marseilles, France, who claimed by its use that pneumonia in all

* Read before the West End Medical Society on December 6, 1902.

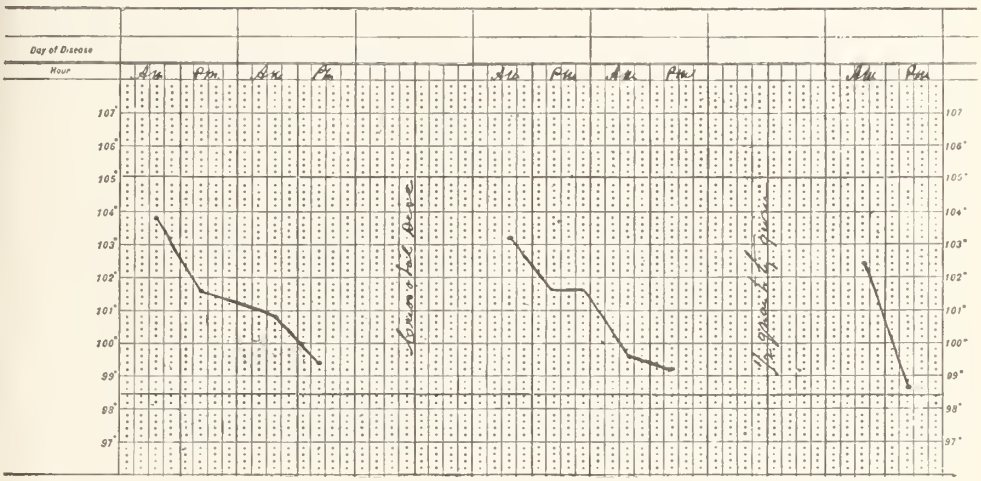
ts complicated forms was deprived of its langers. The evidence these two gentlenen brought forward in favor of the drug vas certainly strong. Subsequent years ave seen its rather extensive trial. The iterature bearing upon the subject has een somewhat abundant and of a most ssuring and encouraging tone. The atitudes taken by observers have been universally laudatory; recorded are a number f observations of a most *startling* charcter.

The treatment rests upon the following asis: In the presence of pneumonia, we rovide the system with a sufficient quan-

infection; to classify it among the acute infectious diseases and to look to the *blood* as the primary source of infection instead of the lungs. Their argument in support of such a view is on this wise. In the first place, the pathogenic rôle of the pneumococcus in the body is not limited to the production of pneumonia. I instance the following remarkable case (Townsend case) taken from literature:

Here is a girl, age 6 years, who is taken suddenly ill with abdominal pain and vomiting. Temperature 104.2° F. Chest is negative. No exudate in throat. 24 hours from beginning of symptoms a

Chart No. 1. TEMPERATURE CHART.



ty of an *antiseptic* to overcome the inasion. The antiseptic selected is *creos te*, nd the proper degree of saturation of the ystem is made possible by the present ommercial form of the drug.

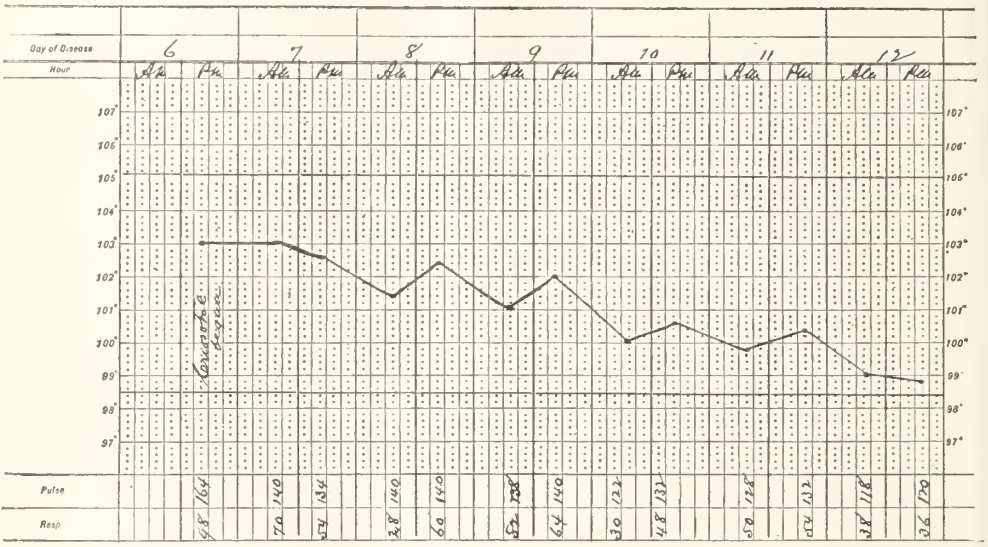
While anticipating exceptions to this line f treatment, at the very outset, we must ot lose sight of the fact that we have an *nalogue* in the treatment of malaria with uinine. A *rationale* lies in the recent onception of the disease. Based upon ecent pathological findings, a *doubt* has een thrown over the original belief in neumonia as a disease *localized* in the ungs. Many observers have come to reard it in the light of a general systemic

convulsion occurs, and 6 hours later, death. *Post mortem* reveals a general infection with the pneumococcus which is recovered from the blood, the lungs, spleen and kidneys. Again, instances are on record where the germ has been the cause of meningitis, of pleurisy, of otitis, of empyema—conditions which have occurred quite independent of pneumonia. If we have a general infection to deal with and the pneumococcus circulating in the system at large, then we meet the indication by saturating the blood with creosote. If, on the other hand, the focal point of view be the correct one, and the lung be primarily

affected; if the specific germ exerts a local influence, and the *lungs* are the laboratory in which are produced the toxins responsible for the rational signs of the disease, *then* we turn to the channel of excretion of the drug which we find is in a large measure these organs. The patient's breath is evidence enough of this.

It is readily appreciated then that the drug may meet with the pneumococcus either in the blood or in the lung; in either instance it undoubtedly affects its life conditions unfavorably.

Chart No. 2. TEMPERATURE CHART.



How much of the drug is required to be given to effect results may be gathered from the following scheme which I have followed closely:

Up to 1 yr.—4—15 grs. daily in 4 doses.
2—4 yrs.—15—45 " " " " "
4—6 yrs.—45—60 " " " " "
6—10 yrs —60—75 " " " " "
Adults m xv q. 3 h.

Administer in Aq. Menth. Pip., with small addition of glycerine.

These doses may safely be increased. When the temperature is normal reduce to ½ the quantity. Keep the febrile curve carefully, and at once resort to original dose should the temperature rise. For these amounts I have found the tolerance of the gastro-enteric tract complete.

The clinical data which I have to submit bears upon the following:

1. The effect of the drug upon the temperature of pneumonia.
2. The effect of the drug upon the lung.
3. The effect of the drug upon the grastro-enteric tract.
4. The effect of the drug upon the general condition of patient.

UPON TEMPERATURE.

a. If the disease be seen early, we may expect in a large percentage of cases a fall in temperature in 24—48 hours from the time the drug is begun. It is true that crises occur under classical treatment and even under no treatment at all, but when it does, it occurs not earlier than the fifth day, when bronchial breathing has been present 2—3 days.

b. This observation is supplemented by a second one, to wit, if the drug is withdrawn at too early a point, *i. e.*, before the auscultory signs disappear, there follows a rise in temperature.

c. Again, if the creosotal be continued sufficiently long after the drop in temperature has occurred, then the apyrexia is permanent.

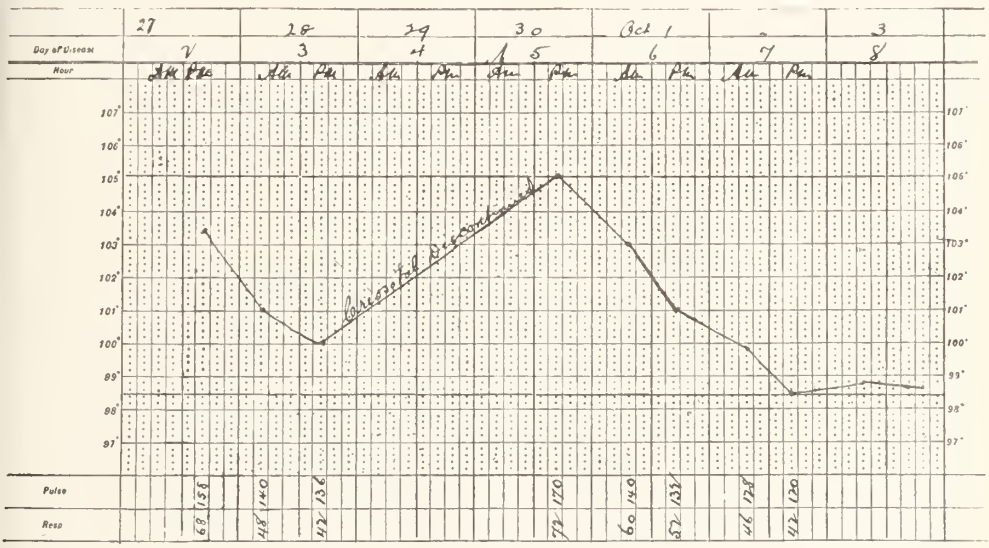
By way of illustration of these points, I cite the following case taken from literature with accompanying chart (marked 1):

A girl, age 3 years, who 12 hours previous to visit has pain in side and vomiting. Auscultation reveals well localized signs. Coughing. Temperature, 103.4°F. Creosotal, 30 min. in 24 hours, in 4 doses. First dose at 9 A.M. Temperature, $103^{4}/_{5}$. 8 P.M. Temperature, $101^{3}/_{5}$. Next A.M. Temperature, $100^{4}/_{5}$. P.M. Temperature, $99^{2}/_{5}$, *i. e.*, apyrexia in 48 hours after onset, in 36 hours after administration of the drug. Cough and general condition improved as did auscultory signs. During the next few days the drug was continued, and temperature did not rise above 98.6. Being alarmed by the dark color of the urine, parents discontinued the drug. On next A.M. thereafter occurs a chill, pain in side, and the evening temperature is $103^{1}/_{5}$. 15 min. in 2 doses in 24 hours were ordered, but temperature never fell beneath $101^{3}/_{5}$. Consequently in the next 24 hours, 22 min. were ordered, and on the following day the A.M. temperature is $99^{3}/_{5}$, P.M., $99^{1}/_{5}$, and râles were diminished. Parents now took upon themselves to give only ½ quantity ordered. On next day temperature is $102^{2}/_{5}$, with chills. The original dose of 30 min. in 24 hours was resumed, and on the P.M. of the same day, temperature, $98^{3}/_{5}$, and did not rise again in the subsequent 5 days of creosotal treatment. The accompanying chart is to illustrate these three points:

1. Fall in temperature is early; in 36 hours in this case.
2. Normal temperature for a few days while the drug was used.
3. Rise of temperature upon too early withdrawal or reduction in amount given.

d. Now the fourth point wherein conditions vary from the normal in regard to temperature under the use of the drug is this: Whereas normally defervescence by lysis occurs only in a very small percentage of cases, under creosotal this percentage is considerably greater. This is a favorable condition, for patients are thereby saved the exhaustive sweat and the shock attendant upon the crisis.

Chart No. 3. TEMPERATURE CHART.



The history and chart (marked 2) of the following case, one of my own, I submit by way of illustration of this point:

Annie S., 3 years, was seen on afternoon of Oct. 4th, on 6th day of her illness. She looked very ill. There was

much cyanosis, coughing, extreme abdominal distention. Temperature, 103; respiration, 98; pulse, 164. Consolidation at left apex. Fine moist râles in lower lobe of left side. Creosotal 20 min. in 4 doses in 24 hours.

Oct. 5. A.M. Child brighter. Distinctly improved. Has slept better than during any night of illness. Temperature, 103; respiration, 70; pulse, 140. Though pulse and respiration were better, the temperature remained the same, and no change was noted in the physical signs. Consequently creosotal was increased to 36 min. in 24 hours, and kept at this point during subsequent treatment. P.M. Temperature, $102^{3}/_{5}$; respiration, 54; pulse, 134.

Oct. 6. General condition good. Coughing. Has a few coarse râles over previous solidified area. Râles of lower lobe have cleared up.

Oct. 7. Broncho-vesicular has replaced bronchial breathing. Coarse râles in larger numbers. Child is distinctly easier. The abdominal distention is less, and 2 days later, *Oct. 9th*, no râles were to be heard. Breathing is only harsh. Moderate amount of dullness. Only an occasional cough. Child brighter and more comfortable. Treatment is continued for 4 days longer, and subsequent history is without note.

My interpretation of the effect of the drug upon temperature is this: That by the impregnation of the system with creosote, and by the local action of the drug as excreted by the lungs, the life conditions of the pathogenic bacteria are affected unfavorably, there is less activity, less amount of toxins produced, and consequently less fever.

The question now arises, is it possible then, if the drug be given early enough, to abort pneumonia? The question of the ability to do this, if the drug be given in the very incipiency of the disease, is difficult to answer, *for*, if creosotal be given *before* the appearance of bronchial breathing, the objection can always be raised that there was no pneumonia present at all. But the following case I detail, with accompanying fever chart, as offering a suggestion if not a proof of this point (chart marked No. 3).

Case, child 2 years, was seen Friday afternoon, Sept. 27. The illness had been of 12 hours duration, of sudden onset. There was coughing; temperature, $103^{2}/_{5}$; respiration, 68; pulse, 158. Right lower lobe behind. Dullness and a few moist râles. Creosotal m iij, q. 3 h., was ordered and given regularly. Next A.M., temperature, 101; respiration, 48; pulse, 140. P.M., temperature, 100; respiration, 42; pulse, 136. Child looked brighter and craved food; 20 minims had been taken. The mother was much gratified to think the child well. I questioned my original diagnosis, for at the time of my second examination, 36 hours of illness, 24 of administration of the drug, though dullness was present, no râles were heard. It was a dispensary case; a Sunday intervened and medication was discontinued.

On Monday afternoon, Sept. 29th, I was sent for again and given the history that on Sunday night the child had had a chill followed by high fever, and was very ill Monday morning. At my visit, temperature, 105; respiration, 72; pulse, 170. Consolidation with bronchial breathing over affected area made out. Creosotal m iij, q. 2 h., ordered and 24 min. were given in subsequent 24 hours, *i. e.*, up to P.M. of Tuesday.

Tuesday A.M., temperature, 103; respiration, 60; pulse, 140. P.M., temperature, 101; respiration, 52; pulse, 132; and though physical examination showed still bronchial voice and breathing, the child looked decidedly brighter and took food better. Medication continued as ordered, and 24 min. were again given up to Wednesday P.M.

Wednesday A.M., temperature, $99^{4}/_{5}$; respiration, 46; pulse, 128. P.M., temperature, $98^{3}/_{5}$; respiration, 42; pulse, 120. At this point coarse râles could be detected over the affected area, and from

this time on there was gradual disappearance of the physical signs, the temperature remained normal, and after continuation of the drug for the subsequent 3 days, recovery was uninterrupted and complete.

The question that naturally arises is this: had the creosotal been continued regularly through Sunday and Monday, would the temperature have fallen to normal and remained so; would the disease have been aborted?

You will observe that on the second day of administration of the drug I was in position to prove one of the great *claims* of the drug, and I regret exceedingly that the drug was not given. The evidence, however, is presumptive, and from the subsequent history of the case I am disposed to believe that it would have proved a favorable one for a prompt and decisive action of the drug at the very beginning of an attack of pneumonia.

EFFECT UPON THE LUNG.

Annie S.—6th day—we find signs of absolute consolidation of left upper lobe—dullness, bronchial voice and breathing, increased fremitus—*but* in the lower lobe of same side, crackles. In the one instance, then, we have to deal with a lung solid with exudate; in the other, the alveoli contain only a small amount. The relative ability of the drug to penetrate the two areas affected is self-evident. Now, what was the experience? On the 7th day, *i. e.*, in first 24 hours, no effect. This time was doubtless necessary to get the system under the influence of the drug. In 48 hours, though, the râles at the *base* of the lung cleared up entirely, and coarse râles (redux râles) made their appearance over the solidified area. It is true that this occurred on the 8th day, when we might naturally expect beginning resolution, *yet* the very speedy and satisfactory result obtained in the part of affected lungs less advanced in the disease, I regard in the light of a control experiment arguing in favor of the drug, *for* under natural conditions the râles of the lower lobe would have persisted until the upper lobe was farther advanced in resolution. On the 9th day, we find bronchovesicular breathing replacing the bronchial; coarse râles in more abundance, and on 11th day the breathing has lost its bronchial character, the râles have disappeared, and a moderate amount of dullness is the only trace left of the physical signs.

Take for instance the case of Moses O. This case was seen early enough to find present only two physical signs, viz., dullness and moist râles. Administration of the drug causes the disappearance of the râles, and coincident with this is the fall in temperature (as noted on chart). I verified this by my own observation. At this point for 48 hours the drug is discontinued, and at the expiration of this time the fever is 105°, and the physical signs those of consolidation. There appears something more than a coincidence with this experience. With resumption of the drug, I noticed a retrogression in the disease, as shown by the fall in temperature and disappearance of the physical signs. So here again, we may regard the first fall in temperature and the disappearance of the râles in the light of a control experiment.

Likewise, in other pulmonary conditions I have noticed beneficial effects under the use of the drug. In catarrhal bronchitis, I have seen in 2—3 days' râles disappear, cough and expectoration diminish. In a case of persistent dullness and râles following an attack of bronchopneumonia, I was enabled through the drug to clear the lung after other measures had failed me.

From these observations, I am persuaded that the drug has a powerful local action upon pulmonary lesions. Applied to pneumonia, my experience has shown results in order of the stages of the disease. Best early in first stage. In early stage of consolidation, the results are satisfactory. Negative, late in the disease, *i. e.*, in the stage of grey hepatization.

UPON THE GASTRO-ENTERIC TRACT.

In the antiseptic action of the drug and its power to control fermentation and decomposition in the bowel, I feel that the experience of all of us will accord. It has an admirable application in the instance of children, who, invariably, swallow their expectoration. I have noticed marked benefit in two instances, in one of which the abdominal distention was extreme on the 6th day of illness; the other, in which the accumulation of gas was gaining great headway on the 4th day. One enema was administered in each instance, but the one, for under the drug the condition remained under control.

Furthermore, it is a source of great comfort to know that the sputum and excreta are voided, disinfected, and that thereby the contagion is reduced to a minimum.

UPON THE GENERAL CONDITION.

Under the influence of creosotal the patient's general condition improves rapidly with the fall of temperature. The tongue becomes clean, the appetite is regained, and the whole facies materially changes for the better. It is gratifying to be able to confidently expect this. I have noticed, with great satisfaction, the return of sleep, of which the patients had been deprived prior to the time the treatment was instituted.

In conclusion, I will say, that I have attempted to follow accurately the line of treatment and to verify in my own work such brilliant observations as have come to us from the experiences of others.

The cases I have submitted are not overdrawn. I have recorded them as faithfully as I knew how, and have demonstrated to my satisfaction the following points:

1. I have noticed in every case treated (with exception of a moribund case) a decided impression upon the temperature.

2. There has been distinctly less coughing.

3. Under creosotal the general condition most certainly improves, the tongue becomes clean, the appetite improves, patients look brighter, more comfortable; are better.

4. I believe that the disease may be materially modified and oftentimes cut short.

5. I know that the drug is admirably well borne.

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*RADIOGRAPHY AND RADIOTHERAPY IN HOSPITAL WORK.**

By H. R. VARNEY, M.D.
Skiagraphist and Radiotherapist to Harper Hospital.

The Roentgen Ray, as an aid to the surgeon in diagnosis and a therapeutic agent of great value, is now beyond the experimental stage; and to-day the staff of every up-to-date general hospital appreciates the need in its institution of an apparatus with which to produce the ray.

Take the case of the oculist, who is confronted with a wound in the eye of a patient whose sight may be at stake. With the assistance of a skiagraph, he is able to determine whether a foreign substance still remains in the eye, and its location, so that he can decide at once his operative procedure.

Then, too, the laryngologist is assisted in the same manner in locating foreign bodies in the larynx, trachea, bronchi, and in what are the safest steps in operations.

The general surgeon, with the numerous operations which he is obliged to perform for the removal of foreign substances from different parts of the body, is able to locate them immediately, and

* Reprinted from *Harper Hospital Bulletin*, August, 1902.

his operation is very much simplified with a radiograph before him at the time of operation.

Radiographs of fractures and dislocations, stone in kidney or bladder are of great assistance and aid materially in diagnosis, though this method of diagnosis has been questioned, and justly so, by careful surgeons. Yet the fault has been with inexperienced operators of the ray. It is true, too, some parts of the body cannot be radiographed because of obstructions to the ray before reaching the parts to be shown.

However, when the medical profession realizes that radiography must be in the hands of only careful operators, it will gain in favor, and be of great benefit in reaching a correct diagnosis.

I do not wish to convey the idea that the rays' diagnoses of fractures or dislocations are infallible to the exclusion of all other methods, yet accurate knowledge can be obtained, with less pain to the patient, if conducted by the expert who makes the skiagraphs and can translate them to the surgeon.

Therapeutically, the rays are generally conceded to be influencing a heretofore uncovered field of incurable diseases. In all forms of lupus, it may now be considered a specific.

Many of the deforming skin diseases, that resist all other treatment, are stimulated to (as far as we know) perfect healing.

Epitheliomata of superficial variety are completely healed and deposits are all carried away, with little, if any, scarring.

Therefore, with absolute relief of many of the inoperable, deforming skin diseases, heretofore incurable, we are led to test its efficacy in recurrent, inoperable, malignant conditions. In these cases the treatment is pleasant; there is almost instant relief of pain. It will stimulate the normal to overcome the pathological cell, first breaking down the cell with the least resistance, if stimulation is continued.

Histologically, the changes in the tissues during stimulation by the rays are similar to, if not identical with, normal inflammation from other causes, though it is deeper and of longer duration.

The surgeon may thus be encouraged to operate upon grave cases by extending to the patient the relief by ray treatment if there is a recurrence. Furthermore, he may go a step further by exposing to the rays a series of operable, malignant cases before and after operation; before, to stimulate normal cells to bring a more rapid and perfect healing; after, to destroy pathological condition beyond the reach of the knife, relieve pain to injured muscles and nerves and, in short, to bring about a more perfect normal process of repair.

Sparteine.—Thomas (*Rev. de Therap.*, lxix., No. 7) records his experience in the clinical use of this remedy. Its diuretic effect is not very marked, the amount of urine voided after its use not exceeding 60 oz. The heartbeats become regular and strong after its administration, and this effect lasts a varying time, according to the condition of the heart. Comparing sparteine with digitalis, he finds that the former is less powerful, the effect less permanent, but it is also less cumulative and toxic in its effect than the latter. As compared with caffeine, he finds that the latter is useful in cases requiring prompt stimulation, and after the crisis has passed he uses sparteine for regulating and reinforcing the heart. In chronic cardiac affections it may replace digitalis and aid its action. The chief indications for its use are chronic myocarditis, the beginning of asystole, and the subjective phenomena of cardiac irregularity. The coincidence of hepatic and pulmonary complications require more energetic remedies. The sulphate of sparteine is easily soluble and suitable for injections and mixtures, or it may be prescribed in pill form. Not more than 3 grs. should be given in 24 hours. Hypodermically, $^5/_6$ gr. three times daily is a maximum dose.—*Australian Medical Gazette*, Sept. 20, 1902.

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Editorial.

MEDICAL INSPECTION OF SCHOOLS.

The medical inspection of public schools, as conducted by the health authorities of New York, promises to carry with it not only temporary but also permanent results. Unquestionably the perfect system of inspection has thus far not been instituted, nor is it likely that it soon will be; for this purpose a daily examination of each pupil in every school would be necessary, a condition of affairs not very feasible for obvious reasons. The present system is a marked improvement on the old one, in that the burden of responsibility is thrown, as it should be, upon the medical inspector, and not upon the class teacher or principal. Instead of leaving to their judgment and discretion the suspicious character of an eruption, a sore throat, an eye affection or the like, the physician is called upon to examine every child at least once a week, and to visit the schools daily for general observation. Already the method is bearing results. Many diseases of the eye, skin, throat, head, etc., heretofore unrecognized or considered harmless by those in charge, have been excluded by the visiting physician. Criticism has been advanced against the exclusion of so large a number of trachoma cases, and it has been claimed that many mild cases were unnecessarily sent home. Be that as it may, if the system serve to call attention to the great prevalence of the disease, whether mild or severe, and if it force these pupils to undergo treatment—for the object of the Health Board is not to exclude indefinitely—then a great good has been accomplished. And after all, who can say when a latent trachoma will discharge and pour forth infection? It is a common experience for medical inspectors to find impetigo contagiosa looked upon as a "fever sore," for molluscum contagiosum to be considered a wart, mumps attributed to enlarged tonsils, trachoma to "weak eyes," and so on. It seems, therefore, as if the medical inspection of schools could be greatly enhanced by giving to teachers and principals a practical course of instruction in those contagious conditions which the inspector is expected to exclude. In this way, the health and educational authorities would work hand in hand, and the greatest good would be accomplished for the greatest number.

NO MORE TIMELY CONTRIBUTION could be presented to our readers than the article on the value of the carbonate of creosote in pneumonia by Dr. JAMES J. PHILIPS. Following the early reports and assertions of CASSOUTÉ and CORGIER, many favorable observations of the use of this drug have been recorded by STOKES, MEITNER, BRIDGES, VAN ZANDT, THOMSON, WEBER and WILCOX, and the consensus of opinion seems to favor the statement of VAN ZANDT, that a large percentage of pneumonia cases are aborted, almost all the remainder are mitigated, and the balance, a very small percentage, are not at all affected. Such authoritative reports cannot fail to make an impression of the great value of creosotal in so formidable a disease. The article by Dr. PHILIPS treats of the subject from many standpoints, and embraces many interesting views and theories. His cases are very instructive and prove his

contentions. One cannot fail to be impressed with the not uncommon occurrence of lysis with this medication and the prevention thereby of the "exhaustive sweat and the shock attendant upon the crisis;" nor can one underestimate the great importance of having at hand a drug which controls—more particularly for children—the disagreeable abdominal distension and reduces to a minimum the contagious nature of the sputa and excreta. The drug is not claimed to be infallible, for the writer states that its results are negative when used late in the disease. We feel that there is a future for creosotal in the treatment of pneumonia, and we look forward to an increasing list of successful cases Reports, such as those of Wilcox, whose experience covers thirty-three patients without a death, of Thomson, who treated eighteen cases with one death, and of Van Zandt, whose collective records show eleven hundred and thirty cases with fifty-six deaths (five per cent. mortality), justify the claim that in pneumonia, carbonate of creosote is as near a specific drug as we are likely to possess, and a life-saving measure of inestimable value.

Ulcerations of the Leg and Foot are frequently so resistant to treatment that any new innovation for their cure is grasped with eagerness. Elevation, rest, strapping, curettage, caustics, antiseptics, stimulants, and even skin-grafting often prove futile, and we find ourselves at a loss for further therapeutic intervention. To those whose practice brings them in contact with this condition, the paper by Dr. J. Lindsay Porteous on sponge-grafting must prove highly interesting, and should serve to place in their hands a measure which may prove a boon in some obstinate case.

Radiography and Radiotherapy have reached a stage whereat they are considered almost a necessity in the scientific practice of medicine and surgery. As with other new ideas, hyper-enthusiasm is giving way to a more definite limitation of their uses and findings, and results are being more carefully and clearly interpreted. Apropos of this, we reprint from *Harper Hospital Bulletin* a short contribution on the subject by Dr. H. R. Varney.

THERAPEUTIC NOTES.

Calcium iodide has been recommended by Mackie as a substitute for iodoform; when used in the form of powder or a saturated solution it is said to diminish suppuration and act as a deodorant.

In sciatica, deep injections of a 25 per cent. solution of sodium glycerophosphate have proved successful in the hands of Robin.

For the pain, swelling and discomfort of mumps, Grande has used the local application of a five per cent. guaiacol ointment once or twice daily, with excellent results.

For the removal of genital warts, John Fearn applies with a camel's hair brush crystals of zinc chloride dissolved in a small quantity of water.

For offensive breath, E. J. Kempf recommends one part of hydrogen dioxide in five parts of rose water.

In the vomiting of pregnancy, Wormley advises atropine and bromide of sodium.

In the interstitial hemorrhages of ulcerative processes the spray of ethyl chloride is often very useful.

Strauss speaks highly of five drops of the tincture of iodine in a teaspoonful of sugar water for the vomiting of pregnancy.

Thiosinamin in half-grain doses three times daily has been employed successfully by Randolph in some cases of tinnitus.

Current Literature.

NIGHT SWEATS IN PHTHISIS.—The notorious irregularity of night sweats as a clinical manifestation in phthisis is largely responsible for the reputation of some drugs and remedial measures recommended for their relief. The following means are, however, of well-established value for the control of sweating in phthisis: *Atropin*, from one-ninetieth to one-sixtieth of a grain, in tablet or solution at bedtime. *Agaricin*, one-twelfth of a grain in tablet. It should be given early in the evening, as it requires about five hours for effects to manifest themselves. Its action is continued, however, for a number of hours. *Camphoric acid*, in doses of two or three grains, a few hours before the time of sweating. It may be given in wafers or in capsules. If the sweating occurs early, a capsule containing from seven to ten grains may be given at 5, 7 and 9 o'clock. *Picrotoxin*, in one-sixtieth of a grain dose, may be given at bedtime. It is sometimes of use. Oxide of zinc (5 grains), strychnia ($^1/_{60}$–$^1/_{30}$ grain by hypodermic), fluid extract of pinus canadensis (30 drops at bedtime) are adjuvants to the above remedies, or may even be successful when used alone.—*The Clinical Review*, November, 1902.

HEMIPLEGIA.—Dr. Daniel R. Brower (*The Medical Standard*, February, 1902), in a clinical lecture on neurology, says: Seen for the first time in a state of coma or semi-coma, as this case was, the first thing to do is to try to reduce arterial tension. In the condition this man was in, administration of drugs by mouth would not be possible, with one exception, and that is the most valuable drug to give to these patients for the purpose of reducing intracranial pressure. I refer to croton oil. Rub up a drop or two of croton oil with a little olive oil and place this on the back of the tongue. This will produce a movement of the bowels within an hour or two at the utmost. You bleed the patient into the bowels—that is, you cause a great determination of the blood to the bowels and thereby relieve the blood pressure in the brain. If I were called to a case of cerebral apoplexy in a man presenting the aspects of plethora that this man does, and found the arterial tension high, I would not hesitate an instant to bleed the patient by venesection so as to diminish the blood pressure immediately. That is, in the beginning of the attack, when the coma is profound, when you have an opportunity to diminish the associated edema and the extent and severity of the arterial thrombosis. With the exception of these two expedients there is but little to be done in the beginning of these cases except to see that the clothing is loose around the neck, so as not to impede respiration. By moving the patient from one side to the other you diminish the amount of stertor.

Later on, after the coma has passed away, you begin the important work of removing the associated edema. This you will do by the administration of small doses of iodid of potassium and by careful attention to elimination from the bowels and kidneys.

At about this time after the attack some of these cases develop fever, the temperature occasionally going up to 101° or 102°. This does not seem to have been the case with this patient, but very frequently, when nature begins the work of encapsulating the hemorrhage or area of softening, fever and symptoms of cerebral irritation supervene. Then you will give your patient the bromids in order to quiet the irritability. The bromids may be given either with or without aconite, as the pulse may be full or otherwise. When the evidences of cerebral irritation have subsided you will resume your treatment by small doses of iodids and tonic remedies, of which strychnia is the most important. You will give ten grains of the iodid of potassium combined with a thirtieth or a twenty-fourth of a grain of strychnia three or four times a day. In

addition to these remedies you will take appropriate measures from the very beginning of the trouble to prevent muscular atrophy in the paralyzed muscles. This man's hand would remain in the position in which you see it now from morning until night, especially if the paralysis were a complete one, unless some effort would be made to change it. The muscle that atrophies early in these cases is the deltoid, a very important muscle. Have the nurse frequently change the position of the arm to prevent that wasting that invariably follows keeping a muscle in a fixed position. After a few days gentle massage of the arm and leg are indicated.

MANAGEMENT AND TREATMENT OF EPILEPSY. —J. R. Nichols (*The Texas Medical News*, September, 1902), in an article on epilepsy, says: The treatment of epilepsy in private practice, insane hospitals and other charity institutions has been unsatisfactory, and improved methods are now being adopted. Several States have established epileptic colonies, which is similar to the system in Europe, notably, Germany, and recent experience along this line is conclusive and should be accepted. It is of prime importance to improve the hygienic surroundings in every conceivable manner, also to encourage regular habits, exercise, industrial pursuits, recreation, education and rest. This procedure can be adopted in those cases that are physically able and have sufficient amount of intelligence to understand and grasp the import of what is best for their welfare. Dietary is important, as there is no question that digestive derangements excite seizures. It is best to provide easily assimilated foods at all times with diminished proteid variety, also to encourage the use of laxative articles, as prunes, tomatoes, oatmeal, fruit and vegetables. The use of tea, coffee, sweets, greasy and fried provisions of any kind are detrimental. The therapeutic treatment is confined principally to a group of drugs known as the bromides. They are known as potassium, sodium, ammonium, strontium and lithium bromide, the former being most commonly preferred. The drugs can be used singly or in several combinations, to suit the case in hand. It is not advisable to administer over one and one-half drachms singly or collectively in twenty-four hours. Fowler's solution is generally recommended to prevent acne, which is quite pronounced in some individuals. The selected periods for the administration of the above remedial agents is previous to the expected paroxysms; that is, increase the dose at that time. Other agents are indicated, as bromopin, which is a heavy oily liquid, but it is more expensive than the bromides and has the advantage in that bromism is not so apt to occur and digestive derangements are diminished. I have had no experience with this drug. Intestinal antiseptics are valuable adjuvants in many cases that are prone to frequent functional derangements, and the most common agents used are salol and beta-naphthol. It is best to administer either of these remedies about two and one-half hours after meals with some carminative. Other therapeutic remedies can be prescribed, as potassium and sodium iodides in undoubted cases when syphilis is directly or indirectly the cause; furthermore, these agents can be combined with one or more of the bromides. The use of opium in conjunction with the bromides and the administration of dilute hydrochloric acid after meals has been extolled highly by some investigators, but the results therefrom are not encouraging, and has no advantage over the remedies previously mentioned. It has been established beyond any doubt that sodium chloride is antagonistic to the full physiological effect of the bromides, and we should eliminate as far as practicable this salt from the dietary. The substitution of sodium bromide in foods has been found to have a very happy effect in many respects and is worthy of trial. No deleterious results will be experienced from this procedure. Statistics do not offer

much alleviation from surgical measures; however, some improvement will occur temporarily from the greater per cent. of selected cases. Of course, in recent traumatic injuries to the cranium, which excite epilepsy, we can anticipate a favorable prognosis. I would discourage promiscuous operations in undoubted chronic idiopathic cases and those of organic origin. However, focal or Jacksonian epilepsy can be frequently relieved or improved if operation is performed over the lesion. Jackson promulgated the fact that epilepsy of this type involved one or more groups of muscles with pronounced aura and no loss of consciousness, involving different regions of the extremities and affecting partially or the entire half side of the body, with all degrees of variation.

Infantile Convulsions and Their Treatment.—Any acute infectious disease may be ushered in by convulsions. Ordinary convulsions in children, particularly those of nervous temperament or of neurotic parentage, may be traced to foreign substance in the alimentary canal, undigested or indigestible food or things. This may, or may not, produce a rise in temperature. Ipecac in proper doses and high rectal enemas, with soft catheter, of soap suds or some bland oil, with perhaps a little glycerine, will soon solve the problem, or point the way for further action and thought. Intestinal parasites are often the cause of convulsions in children and of pseudo-chorea in half-grown children and young adults. The convulsions frequently seen in the beginning of some acute infectious diseases are often due to the fact that undigested food remains in the stomach, and the sudden chill or rise of temperature shuts off the supply of digestive fluids, and the process of digestion is stopped. The food undergoes fermentation, and poisonous products are formed by fermentation instead of natural digestion. Some forms of ptomains and leucomains are formed, which either as foreign substances or direct nerve poisons produce convulsions. Then it is wise to empty the stomach and bowels and carefully to keep them as empty as consistent with conserving the vital energy of the patient. Egg albumen, raw, in cracked ice or cool water, shaken up, here acts admirably; also some forms of peptons and peptonoids.

Convulsions with eyes and pupils apparently normal, no rolling of the head, or biting of the tongue, or frothing at the mouth, with a reasonable temperature and a history of having passed normal urine, we would look to the intestinal canal. Epileptic convulsions can usually be easily told. The convulsions of beginning meningitis or cerebro-spinal or of tubercular meningitis have some special symptoms often to guide one: the cry, the rolling head and eyes, the projectile vomiting and the temperature. Of acute nephritis, uremia, also, history of an acute infectious disease or some poison going before. Foreign bodies in the ears or nose should be looked for if doubt remains. Even a pin might be sticking into the child and produce convulsions. Rickets or rachitis (Englische Krankheit) sometimes predisposes convulsions. Diseases of the heart or certain forms of tumors, if causing convulsions, are not easily managed. Vegetable or mineral accidental poisoning may cause convulsions and should be looked for or enquired into. Exhaustion, as from diarrhea, may be a cause. Fright, as from a simple fall or sudden fright of any kind, might cause spasms. There are other causes, but not usually met with. Chloroform, bromides, chloral, hot packs and baths. Foregoing treatment is good in its way. Try for better.—*Georgia Journal of Medicine and Surgery*, March, 1902.

Infantile Syphilis.—Rothschild (*Allgem. Wiener Med. Zeitung*, 1902, No. 1) bemoans the fact in the fight against the ravages of gastro-enteritis, tuberculosis and alcohol, those of syphilis are almost

entirely forgotten, although this latter disease probably causes more deaths in early childhood than any of the others. In fact, according to Fournier, as many as 50 per cent. to 60 per cent. of children could be kept alive but for it. In syphilis, more than in all others, the results of preventive and curative treatment are considerable.

From the standpoint of prevention the author recommends most thorough and lengthy treatment of the parents before and after conception. Of curative treatments he recommends, in every case, a warm bath as soon as possible after birth, followed by transference to an evenly heated incubator, the child being wrapped in ordinary cotton wool. Great care should be taken to avoid a cold temperature during nursing or changing the clothing. Several mustard baths should be given daily, followed by massage with warm oil or cologne. If possible, the mother's milk should be used exclusively for feeding; if impossible to obtain or insufficient in quantity, sterilized cow's milk should be used to take its place or to make up the deficiency if the child is mature. If it is premature, peptonized milk should be used; or, if that cannot be procured, the cow's milk should be followed by a coffee-spoonful of a mixture of pepsin, 15 grains; pancreatin, 15 grains; alcohol, 75 min.; dil. hydrochloric acid, 10 min.; water sufficient to make 3 ounces, as their digestive powers are at a very low point. Mercury should be given either by mouth or by inunction. Van Sweeten's solution, in doses of 20 to 50 drops daily, depending upon the age, is given in milk; but inunction, with from 15 to 30 grains of mercurial ointment, is better. Mercurial baths are also very useful, the solution ranging from 1 : 1,000 to 1 : 5,000. They should not be employed if many ulcers are present. In such children contagious diseases should be especially guarded against, as they are more subject to these than are others.—*American Medicine*, Aug. 30, 1902.

Brewers' Yeast in Therapeutics.—Julius Ullman (*American Medicine*, Oct. 11, 1902), in an interesting contribution, states that brewers' yeast has also been employed by him in a number of cases of bronchopneumonia and with evident excellent results. In bronchitis, especially the chronic forms, and of the fetid variety, it is a remedy worthy of trial, as it increases the expectorant action in conjunction with its other properties. Regarding its use in tuberculosis, it might be stated that in those who have marked gastric atonic dilatation it may produce nausea, vomiting and diarrhea, but this may be overcome by lavage and bowel washes, should it occur. Commencing with ounce doses of fresh brewers' yeast and gradually increasing to three ounces *t. i. d.*, given in beer, sugar water, or plain water, or even taken as such, brewers' yeast is well borne by the patient in a majority of cases. If they complain of tympanites, then the dose may be diminished.

The therapy with fresh brewers' yeast is applicable only in such places where it can be obtained fresh from a brewer, and it must be obtained daily. It is, however, a cheap way of applying therapeutics, and for that reason may be given to the very poor. As obtained it is a reddish, frothy liquid, slightly acid in reaction, with the odor of beer, and of pleasant taste. To overcome the difficulties in obtaining it, there are, I believe, several efficacious derivatives on the market. De Backer and Tournier have used a pure culture of yeast hypodermically in tuberculosis, cancer and diabetes. The injection of ½ to ¾ a syringeful for an adult, $^1/_6$ to ⅓ syringeful for a child are used intramuscularly every 8 days, then every 15 days, for three or four weeks until about four to six injections are given. Tournier gives reports of a favorable action observed in 20 cases of tuberculosis and three of diabetes. Because Dr. Brault found an increased amount of glycogen in sections of malig-

nant neoplasms, it was used in a number of cases of recurrent and inoperable malignant growths in some of which the pain and later the growth disappeared ("Cancer of Breast," by Tournier). There are 10 such cases reported, and it is recommended in those cases.

We must then conclude that brewers' yeast, because of its ferments, nuclein, nucleinic acid and phagocytic action, is a remedy of value in therapeutics; its use is not confined to any one disease, but wherever an increased resistance of the organism is required. It has proved itself of value in furunculosis, carbuncles, diabetes, tuberculosis, bronchitis, bronchopneumonia, enteroptosis, habitual constipation, cancer and other affections. Used in cases of advanced tuberculosis, an improvement in symptoms indicative of secondary pyogenic infection was noted.

Adrenalin in Combination with Solutions for Local Anesthesia. — Charles Elsberg (*American Medicine*, March 1, 1902) has been carrying on a series of experiments with this new drug, and finds that, if a drop of a 1-1000 solution be injected under the normal skin, a slight burning sensation is felt, but no anesthesia occurs. Within one minute an area of skin about two inches in diameter becomes blanched and almost bloodless, and remains so from six to twelve hours. The same effect will be observed if a 1-5000 to 1-15,000 solution be used, but with these weaker solutions the blanching appears only after a few minutes and disappears after three to six hours. After the blanching of the skin disappears, the tissue apparently returns to its normal condition. No deleterious effects, such as sloughing or subcutaneous ecchymosis ever followed these injections. In the course of the investigations cocaine and eucain solutions containing adrenalin in the proportion of 1-5000 to 1-20,000 were used. It was found that the anesthetic properties of the cocaine and eucain were preserved, while the adrenalin caused the same blanching of the tissues as previously observed, which extended one to two inches beyond the area infiltrated.

In performing minor operations under cocaine to which 1-5000 to 1-20,000 adrenalin had been added only the larger vessels bled when cut across. The smaller vessels were contracted so tightly that no blood could escape from them and therefore there was no oozing. It was often unnecessary to sponge off the wound a single time during an operation. The healing of the wound was not interfered with in any way.—*Georgia Journal of Medicine and Surgery*, March, 1902.

Creosotal in Acute Non-Tubercular Affections of the Respiratory Organs of Nurslings and Children.—Dr. Wilhelm Meitner (*Allgemeine Medicinische Central-Zeitung*, Jan. 22 and 25, 1902) is against the employment of too small doses, which do not give the desired effect. Infants seriously ill should get 1 gram (15 grains) daily if under six months of age; and up to one year of age 1.5 grams (22½ grains). From one to two years the daily amount should be 2 to 2.5 grams (30 to 37½ grains), from two to five years 2.5 to 4 grams (37½ to 60 grains) and from five to ten years 4 to 6 grams (1 to 1½ drams.) The number of doses into which these amounts are divided are not of much importance; but the drug should be administered every five to eight hours. Care should be taken not to let too great an interval elapse without medication during the long winter nights.

As the temperature falls, the dryness of the tongue, the audible, labored breathing, the frequent pulse, and the restlessness and depression also disappear. Thirst, headache, dyspnea and exhaustion become less; the children get brighter; and the appetite often returns suddenly, as it does after typhoid fever, so that it is difficult to keep the patients to a suitable diet for the first twenty-four or forty-eight hours thereafter. Nursing infants can be permitted to satisfy their hunger freely.

The general symptoms disappear even before the creosotal has had time to exercise its full effect upon the local focus of disease.

The more recent the disease changes, the quicker do they give way. Simple acute laryngites and anginas disappear in one day; they seldom persist for two; and in the latter period even sub-chronic forms lose much of their intensity, to disappear by the fourth. In acute bronchites, in their earlier stages, we can be sure of a rapid result; they often disappear entirely in twenty-four hours. The same is true when it has entered into the dry stage; a single prescription is often sufficient to cure the case.

Bronchitis cases that are several days old, and in which the mucosæ are greatly irritated and dry, are rapidly moistened by the creosotal and cured in a few days. The solvent action of the drug is well seen in the older, dry bronchites, with but little tough secretion; it quickly renders the expectoration more fluid, and ends the process. The same thing occurs in the capillary bronchitis of infants; the tough mucoid masses become fluidified, and the cough becomes ceaseless, thus avoiding the dangers of atalectasis of the lungs and suffocation. Since Meitner has employed creosotal he has had three cases of pronounced capillary bronchitis, and has lost none of them.

In bronchopneumonic processes the areas of consolidation rapidly disappear under the solvent action of the drug; and in lobar pneumonias the infiltrations melt away soon after defervescence of the fever. This latter usually occurs at a time that there is still pure bronchial breathing without any râles at the site of the local lesion. But they appear abundantly during the next twenty-four hours, and the children improve so rapidly that they can hardly be kept in bed; and during the next two or three days the lungs clear up entirely, for the expectoration is abundant and easy in consequence of the solution of the mucoid masses.

There is hardly any period of exhaustion or convalescence after these severe bronchites, bronchopneumonias, and pneumonias; it is almost completely absent under the creosotal treatment; and therefore the gastro-intestinal complications that are generally so common are but rarely seen.

Infants and small children, as is well known, swallow their expectoration; and here the creosotal, a most excellent intestinal antiseptic, prevents that tract from being damaged thereby.—*The Canadian Journal of Medicine and Surgery*, May, 1902.

Endocarditis and Pericarditis.—William Henry Porter (*Medical News*, Sept. 6, 1902), in an article on this subject, states that in the treatment of the active inflammations of the endo- and pericardial membranes absolute rest in bed is the first desideratum. This should be prolonged for a considerable period after the more acute symptoms have subsided, if we are to secure the best results and prevent the establishment of a chronic lesion.

Locally, for the relief of the pain and the tachycardia, which are the two most urgent symptoms in the acute inflammations, heat or cold applied directly over the pericardial region will in many instances give prompt and almost perfect relief. In some instances cold, in the form of an ice-bag, gives the best results; in other cases heat works the best. In some a fly-blister may be required. All three methods act, in all probability, reflexly through the central nervous system, thus causing a change in the circulatory activity in the inflamed endo- or pericardial membrane, by which the local pressure upon the nerve-endings distributed to the membranes is relieved. Outside of these measures there is little that can be done locally or directly to modify the pathological processes. Here, as in all other inflammations, the same general rules that are applicable to the treatment of the disease, with which these inflammations are associated, hold true with equal force.

SELECTED PRESCRIPTIONS.

HYPERCHLORHYDRIA.—

℞ Sodii bicarb.....ʒ v
Magnes. ust.,
Magnes. ammonio-phosph. āā ʒ ij ss

M. Sig. Half to a teaspoonful *t. i. d.*, two hours after meals. —EINHORN.

ACUTE ARTICULAR RHEUMATISM.—

℞ Sodii salicylatis,
Sodii carbon.....āā ʒ ij
Aq. camphorae q. s ..... ℥ vj

M. Sig. ʒ ij q. 1 h. GEORGE DOCK.

CHAFING.—

℞ Ichthyol,
Tinct. benzoini comp.,
Acidi boracici.....āā ʒ i
Petrolati q. s. ..... ℥ ij

R. B. ELDERICE.

GONORRHEA.—

℞ Hydrarg. chl. corros.....gr. 1/6
Acidi carbolici..... ʒ iss
Zinci sulpho-carbolat.. .....gr. xxiv
Boro-glyceride (50% sol.).....℥ ij
Aq. rosae q. s. ad.....℥ viii

M. Sig. Inject after urination.

G. A. WHITE.

CHRONIC ARTERITIS.—

℞ Hydrast. hydrochlor.....gr. iss
Sodii iodidi..... ʒ ss
Aquae destill., q. s..... ℥ vi

M. Sig. Two tablespoonfuls each morning.

—BOIX.

VULVAR ECZEMA.—

℞ Resorcin.....gr. 20
Salicylic acid.....gr. 10
Cocaine hydrochlorate.....gr. 12
Ichthyol ....m. 40
Wool-fat ..... ʒ 4
Vaselin q. s. ad..... ℥ 1

M. Sig. Apply at night.

—MERCK'S ARCHIVES.

TOXIC ECZEMA.—

℞ Calomel.....gr. i
Salol.....gr. xx
Guaiacol..... .....gr. xv
Lacto-peptine.....gr. xxx

M., ft. pulv. No. xii.
Sig. One powder *t. i. d.* —MELKEN.

FLATULENCY.—

℞ Creosoti ... .m x
Bismuthi subcarb.....ʒ ii
Glycerini,
Aq. Menth. Piper .....āā ℥ i

M. Sig. ʒ ij 3 h.

—*Maryland Med. Journal*, June, 1902.

PHTHISIS.—

℞ Pulv. bellad. rad.....gr. 1/8
Pulv. Doveri .....gr. ss
Sulph. sublim.,
Sacch. sol.....āā gr. viii

M. Sig. One powder. Sig. Repeat two to ten times daily p. v. h.

—*Med. Times and Hosp. Gaz.*, May 10, 1902

CORNS.—

℞ Resorcin,
Acidi salicylici,
Acidi lactici .....āā 2
Collod. flexile 20

M. Sig. Apply daily. —*Merck's Report.*

SUPERFICIAL BURNS.—

℞ Cocaine .....gr. v
Ung. zinci oxidi .....ʒ i

M. Sig. Apply on gauze. —*Indian. Lancet.*

OTITIS MEDIA PURULENTA.—

℞ Formalin.....gtt. v
Alcohol (95 per cent.).....ʒ ij
Aquae .....q. s. ℥ i

M. Sig. Ear drops. —N. G. WARD.

CARDIAC FAILURE IN TYPHOID.—

℞ Spir. ammon. arom..... ℥ ss
Tinct. digital..... ʒ ij
Elix. simpl..... ℥ ss
Aq. destill .....q. s. ℥ iij

M. Sig. ʒ i q. 3 h.

—*N. Y. State Journal of Medicine.*

BARBER'S ITCH.—

℞ Zinci carb. praecip.,
Zinci oxidi ..... āā ʒ i
Glycerini,
Liquor plumbi subacet. .....āā ʒ ij
Aq. rosae.....q. s. ℥ viij

M. Sig. Use as a wash morning and night.

—VAN HARLINGEN.

DIARRHEA OF PHTHISIS.—

℞ Bismuthi subgallatis..... ℥ i
Guaiacoli carbonatis ..... ʒ i
Iodoformi ... .gr. xxiv

M. Ft. in cach. No. xxiv.
Sig. One cachet every four hours.

—*The Medicus*, September, 1902.

CARCINOMA OF CERVIX UTERI.—

℞ Methylene Blue..... ʒ iss
Alcohol, 90 per cent.,
Glycerin.....āā ʒ iij
Aquae.....q. s. ℥ vij

M. Sig. Apply. —CUCCA and UNGARO.

TO PREVENT URETHRAL CHILLS.—

℞ Sulphate of morphine.....gr. 1/10
Tinct. of aconite..... ♏ ij
Oil of wintergreen ..... ♏ xv

M. Sig. One dose. —WEIR.

The American Therapist.

A MONTHLY RECORD OF MODERN THERAPEUTICS,

WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

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Original Articles.

NIRVANIN IN LOCAL ANESTHESIA.

By F. C. FLOECKINGER, M.D., Taylor, Tex.

Local anesthesia has incontestably conquered the field in surgical practice. The discoverer of this method, Corning, of New York (*New York Medical Journal*, 1887, Vol. XLII, No. 12), found by experience that after constriction of a limb and injection of a 4 per cent. solution of cocain muriate in the vicinity of a nerve-trunk, peripherally from the constricting-coil, complete anesthesia supervened after the expiration of a few minutes.

Corning, however, applied this method only to the external cutaneous nerve of the arm, and his experiment fell into oblivion until Oberst of the Surgical Clinic at Halle undertook further experiments and published his results. Oberst demonstrated that it is quite unnecessary to employ a greater strength of cocain than a 1 per cent. solution, and he maintained that the analgesic effect is due chiefly to the pressure of the constricting-coil and the resulting complete interruption of the circulation (*i. e.* artificial ischemia). Pernice published Oberst's experience in the *Deutsche med. Wochenschrift*, 1890, No. 14.

Among the yhysicians who have been conspicuous for their services in this field, Schleich, H. Baun and Otto Maur deserve especial mention; and it would overstep the limits of my space to give all that has been said for and against this method by the physicians who have occupied themselves therewith.

The methods extend to the extremities and penis; or, in other words, to all portions of the body which may be rendered ischemic by constriction. It is astonishing how little country practitioners have occupied themselves with this method, when the latter is so simple and, when a 1 or 2 per cent. solution of nirvanin is used, so completly devoid of danger. Some colleagues, perhaps, have made a trial of this method without securing the desired result; but in these cases the blame is to be attributed to defective technique. One must use this method, and I leave it for the clinicians to show if my words are not correct. That it is also necessary for the physician to have the anatomy of the nerves in mind, hardly needs to be mentioned; and a few trials combined with patience will be crowned with success in a short time. I have demonstrated these methods to several of my colleagues, and they marveled at the facility with which good results were obtained.

When the result of local anesthesia was in its initial stages, cocain was used in strengths of 4, 3 and 2 per cent., and cases occur in literature in which the anesthesia was accompanied by toxic phenomena. For this reason, many physicians have feared to apply this method. Later eucain was introduced into practice and used in many clinics. Wohlgemuth, in a discussion before the 27th Congress of the Deutsche Gesellschaft für Chirurgie, stated that eucain possessed no advantage over cocain, and did not produce as good anesthesia as the latter. All these disadvantages were obviated by the introduction into practice of nirvanin. My space does not permit me to go more closely into the physiological action of this preparation, and I, therefore, refer

the reader to the literature which has appeared on this subject; and I shall only remark here that nirvanin is ten times less toxic than cocain, and further shows antiseptic qualities, with the result that solutions of it may be preserved for a long period without spoiling.

The operations which I have performed under anesthesia by nirvanin injection by the aid of the Oberst-Braun method, since the publication of my first article, are as follows:

28 cases of panaritium of mixed nature.

2 cases of lipoma of the extremities.

1 case of osteomyelitis with necrosis of the tibia.

1 case multiple ligation of the branches of the greater and lesser saphenous veins.

1 case of disarticulation of the thumb at the metacarpo-phalangeal joint.

6 cases of phlegmon of the palm of the hand (septic nature with abscess formation beneath the deep palmar fascia).

4 cases of ingrown nail.

4 cases of circumcision.

I will here discuss the cases so far as may be necessary without giving case histories, for the latter would transcend the space which stands at my disposal.

In ordinary cases I apply a 2 per cent. solution of nirvanin, and in extensive operations, in which a large amount of injection-fluid must be used, 1 and 2 per cent. solutions suffice. As a solvent for nirvanin I employ a decinormal salt solution.

In order to open felons painlessly I make use of the following method: The finger concerned is encircled with two turns of a thin rubber tube, one inch to one inch and a half from the field of the operation. After waiting a few moments a second rubber tube is applied behind the first one, which latter is then removed. The second tube produces a greater degree of constriction than the first. I employ this method in all cases because I have observed that to constrict too tightly with the first tube causes too severe pain. In general the patient immediately complains after the constriction is applied of marked pressure-pain, but this is abated after a few moments. After the constriction of the limb, a syringe holding 10 c.c., with a fine nozzle having a sharp point, is filled with 2 per cent. solution of nirvanin, and the injection is made laterally in the aponeurosis of the finger. In order to render the first puncture painless I employ the chlorid of ethyl spray. The needle is introduced distally from the constricting tube in a peripheral direction, and the fluid is slowly injected. Quite an amount of pressure is necessary in order to empty the syringe. After practicing the injection on one side of the finger the process is repeated on the other side, and the operator waits for a few moments. It is difficult to state the exact interval of delay necessary before operating, as this depends upon the degree of inflammation, and in one case I was obliged to wait 23 minutes before I could carry out a painless incision. Patients often complain for hours of persistent pains at the place of constriction.

One stage of the *modus operandi* is of importance; this is the application of the constricting tube, which should occur as far peripherally as possible, as thereby the anesthesia will appear sooner and last longer. On an average I was successful with one grain of nirvanin, and in no case did I observe toxic phenomena. The closer the rubber was applied peripherally the less injection fluid was required. If the constriction was applied at the base of the finger, four punctures were necessary on the average, viz. two dorsal and two palmar.

It is self-evident that, after extinction of the sensory activity of the main trunk, the function of the peripheral branches is also lost.

In both my cases of extirpation of lipomata nothing occurred worthy of mention, save that both growths developed after trauma. The latter consisted of a blow without solution of continuity of the skin.

One tumor was seated on the lower extremity, two inches below the point of passage of the superficial peroneal nerve, and had the circumference of a silver dollar. The first constriction of the leg was applied one inch above the tumor, and the second was applied in front of the first. The first was then removed, and a single injection of 2 per cent. solution of nirvanin produced complete anesthesia of the integument. A second syringe was emptied at the base of the tumor, and after waiting four minutes, the operation could be carried out painlessly.

The other tumor was seated on the volar surface of the forearm somewhat peripherally before the point of exit of the palmar cutaneous branch of the median nerve. Its excision was painless. The opening of the abscess of the bone in the tibia offers certain interesting points. Constriction of the limb was practiced below the knee joint, and in all there was injected 50 c.c. of a 1 per cent. solution of nirvanin. Injections made in the vicinity of the greater suphenous, deep peroneal, and superficial peroneal (before his breaks through the aponeurosis) directly before the constricting-coil. The incision in the tissues was wholly devoid of sensation, and only the penetration of the probe into the carious bony cavity was somewhat painful. I injected a few drops of a 5 per cent. solution into the inflamed periosteum after previously treating the site of the puncture with a 20 per cent. solution. After waiting a few minutes I could carry out the chisling of the bone with a complete absence of pain. The scooping out of the bony cavity with a sharp spoon was also completely painless.

In ligating the branches of the vena saphena, major and minor, in the leg, I injected directly into the vicinity of the field of operation, as this lay directly below the constriction coil. The greater saphenous nerve and the tibial nerve run, after their passage through the aponeurosis, directly with the major and minor saphenous veins, and extirpation of a piece of vein an inch or so in length could be carried out in perfectly painless fashion.

In disarticulation of the thumb four injections were made at the base of the thumb, and one injection directly among the ligaments which form the joint. After nine minutes delay the operation could be performed in a perfectly painless manner.

The opening of the abscesses in the palm of the hand required a good deal of injection fluid, so that the strength of solution used was but ½ per cent. Constriction was made at the wrist, and the needle introduced into the deep tissues, so that the deeper-seated nerve filaments could be rendered analgesic. The injection of the liquid in inflamed tissue requires a great deal of force, and in these cases the aparatus invented by Prof. Matas, of New Orleans, will be of great help to the practitioner.

The method of injection in operating upon ingrown nails offers nothing special for discussion ; it is only necessary to inject one syringeful beneath the nail and into the nailbed.

In operating for circumcision the constricting-coil was applied medial one and one-half inches from the sulcus coronarius, and the injection made directly between the skin of the penis. By this means both laminæ of the prepuce were made insensitive. All operations may be made painless by the use of an average of two per cent. nirvanin solution.

In conclusion, I will briefly remark that this method gives excellent results if the technique is under control, and the operator has sufficient patience.

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Cystitis. — Charles B. Mallery (*Albany Medical Annals*, December, 1902) says:

The treatment of the acute cases consists in rest in bed, with the hips elevated, with hot applications applied to the region of the bladder and perineum. The diet should consist of milk alone, and sufficient morphia should be given, preferably by way of the rectum, to control the tenesmus. To make the urine bland and unirritating, the natural mineral waters, with the saline diuretics, as also the acetate or citrate of potassium, are useful. Boric acid, benzoic acid, salol, or urotropin are useful to render the urine aseptic.

For the cystitis caused by irritant drugs, as cantharides or turpentine, the monobromide of camphor is generally useful, or the injection of fifteen drops of a one per cent. solution of cocaine into the prostatic urethra will control the tenesmus, and this can be repeated in three hours if necessary. But with the best treatment only one in five of the acute cases are permanently cured.

The chronic cases are due to central nerve trouble, pyelitis, tumor of the bladder, calculi, enlarged prostate or stricture of the urethra. The spinal cases, if the other conditions warrant, will do best by establishing free, permanent, perineal drainage. Those due to pyelitis or inoperable tumor demand the most carefully conducted local treatment. Those due to calculi or stricture will fully recover on removal of the cause.

*THE NATURE AND TREATMENT OF OBSTINATE VOMITING.**

By Alfred W. Perry, M.D., San Francisco, Cal.

(Read before the San Francisco Clinical Society, January 21, 1903.)

Obstinate vomiting not dependent on some gross anatomical alteration is usually reflex, and that is the kind I wish to describe.

By reflex vomiting I mean that caused by, 1st, a disease of the corresponding nerve centers, 2d, an irritation conveyed to these nerve centers from some distant organ, and 3d, by a heightened irritability of these centers from debitity; it is what had been well named a reaction of debility. Vomiting long continued does not often depend on a disease of the stomach, and is therefore rarely favorably affected by medicines introduccd into that organ.

The highest function of the nerve centers is the inhibitory: the power of the higher centers to control or prevent excessive action of the lower centers, which cause motion and secretion. This power is weakened in all conditions of debility, and especially in neurasthenia and hysteria. Excessive action takes place on the contact of even normal stimuli to the gastric (mucous) membrane, which may be in a healthy condition; these stimuli provoke disorders of secretion, hyperchlorhydria, or motor disorders; the one we are now considering, obstinate vomiting. This is a "reaction of debility."

The first kind is due to organic brain disease, is not common, and is not a predominant symptom or condition to be treated; while the last two are often so persistent as to threaten life from subnutrition.

Uterine vomiting of pregnancy is a disease of the second mentioned variety.

The third variety is the most common and threatening. It is found in neurasthenia and hysteria, and is probably always started by some slight gastric disorder.

* Reprint from the *Pacific Medical Journal*, February, 1903.

Four plans of treatment are available:

1. To reduce the quantity and quality of the food to that point which will be retained, and gradually increase.

2. To influence the stomach by drugs administered by the mouth.

3. To reduce the general nervous irritability by massage and the rest cure.

4. To reduce the nervous irritability by nervous sedatives administered by hypodermic injection and rectal injection, at the same time pushing the food to a little above the limit of tolerance.

The first plan of treatment is the oldest; is good, but too slow; too much time is lost in patients already too much reduced, and in danger of death from exhaustion.

The second treatment is irrational, as the stomach itself is not diseased. It is rarely successful, though it may be consoling to the physician to say to himself, or consultants, that he has used every drug recommended. Excepting a starting dose of calomel, to cause moderate purgation, I think all stomach medication is to be condemned.

Massage and the rest cure will succeed in a greater number of cases than any other treatment. It is the ideal treatment for those who will allow it and are able to pay for it; these we, unfortunately, find in the minority.

The fourth plan of treatment I find to be nearly as successful as the third, with the advantage that it can be applied to all classes easier than the rest cure and massage.

To go into detail, it is the use of bromide of potash, chloral and valerian, singly or variously combined, by rectal enemata exclusively; 60 to 90 grains bromide, with 20 to 30 grains chloral, are given in the 24 hours, divided into two or three doses; this is continued after the vomiting is checked, to keep down the increased amount of food which is allowed, which I find it will do with almost mathematical certainty. I give any kind of solid food, with the only proviso that it be finely divided, peptonized milk, buttermilk or koumiss, meat chopped *after being cooked*, toast, crackers, hard bread. As these patients have a great thirst, for the first week most of the water allowed should be given by enemata. On this general plan of treatment I rarely fail to check at once long-continued exhausting vomiting of any reflex variety, whether it be central from brain disease, puerperal, or hysterical and neurasthenic. Under the tolerance of food induced by the continued use of the sedatives mentioned, nutrition improves rapidly, the debility passes away, and on the suspension of the medicines the vomiting does not recur.

I have in several cases used 10 or 13 grains chloral and 30 grains bromide of potash twice a day by enema for 30 days, with satisfactory nutrition at the end of that time. Chloral is very irritating in a suppository, somewhat less so in enemata of 2 or 3 ozs. of mucilage; and to cause them to be retained, it is often requisite to give a preliminary enema of 5 to 8 m. of tr. opii in ʒ ii water.

Morphine hypodermically will arrest most kinds of vomiting for a short time; but it has the objection that it impairs digestion, produces hyperchlorhydria, and also arrests the normal bowel peristalsis; this is often sufficient to cause vomiting.

The deprivation of water from the vomiting produces a great disorder of the nervous system; an important part of the treatment is to supply water by large, warm saline enemata, given in the intervals of the sedative enemata.

The histories of typical cases of each variety of reflex obstinate vomiting I read to your society, but forbear to burden this article with their publication.

A five per cent. guaiacol ointment is useful in mumps (grande) and in relieving the pain of epididymitis.

For the snuffles of acute coryza try dropping a few drops of liquid albolene into each nostril two or three times daily.

*NEURALGIA.**

By F. Pirnat, M.D., Chicago, Ill.

The word neuralgia has been used to designate a pain shooting along the course of a nerve which cannot be attributed to a definite organic disease. Neuralgia is, therefore, in many cases not a disease but a symptom. Usually, by a thorough physical examination, one can find diseased nerve trunks (neuritis) or ganglia or reflex irritation from some pathologic condition in a viscus, such as the lungs, stomach, or female generative organs. As, however, the word is in popular use and the determination of the true cause or focus of a neuralgic pain is often extremely difficult, I will speak of these cases as commonly classified according to the nerves affected, viz., trigeminal, sciatic and intercostal.

Some authors divide neuralgia into idiopathic and symptomatic forms. In idiopathic neuralgia the pain does not depend upon any structural change in the nerve trunk; for instance, the nerve will appear in a certain segment of the main nerve on one side and suddenly shift to some distant part of the body. It will disappear entirely from the site first affected and appear on the corresponding opposite. Very often it remains stationary in the area supplied by the nerve affected.

Another opinion held by many physicians is that neuralgia is caused by a passive congestion of the affected nerve trunk or its centre. This congestion is increased when impulses are sent along the nerve fibres, until the nerve becomes irritable and gives out not a natural impulse, but a sudden shock, causing pain. Therefore we find attacks of neuralgia intermittent and remittent, and when bodily activity is greatest the pain is most severe. A nerve will bear a certain amount of congestion without manifesting its resentment in pain, but the nutrition of the parts supplied by such a nerve is interfered with. For instance, the skin or mucous membrane may become inflamed or undergo degeneration, the hair fall out or turn gray, ulcers will appear, etc.

In the symptomatic form actual disease or inflammation in the nerve elements can be demonstrated. Neuralgia from this source may exist in any nerve, but most frequently attacks the trigeminal or the sciatic.

Pain is the most prominent and unbearable symptom of neuralgia. This is usually of pronounced severity, and occurs in intermissions and remissions. It is of a boring, burning, or shooting character; at other times a dull ache, which shifts from one place to another without exacerbation. It is usually limited to the distribution of the affected nerve or its immediate surroundings. Before the onset of the pain there may be a hyperesthesia of the area supplied by the affected nerve, as well as uneasy sensations, tingling and prickling under the skin. During an attack of neuralgia the skin may be exquisitely tender, and points of tenderness may be found in the course of the nerve. Movements of the affected part are very painful. Twitching and spasm of the muscle may occur. Vasomotor and trophic disturbances may take place also, such as alternate burning, coolness of the skin, local edema or erythema, falling out and turning gray of the hair. After lasting a variable length of time the attack subsides. It may be repeated at frequent intervals or not occur for a day, week or month. Very often it only occurs during pregnancy or at the catamenia.

Neuralgia is more often found in women than in men. Hereditary predisposition is a factor. Children are rarely attacked. Patients suffering from this malady are apparently in good health, but very often constitutional derangements lie at the bottom of the trouble. The most prominent among them are anemia, then rheumatism, gout or malaria. It is very often the first indication of a weak nervous system, and may be one of first symptoms in the

* Abstracted from the original article in *Cincinnati Lancet-Clinic*, February, 1903.

onset of acute diseases, particularly typhoid fever. Exposure to cold drafts, reflex irritation, as from carious teeth, lead poisoning, diabetes, are other common causes.

Trigeminal neuralgia, neuralgia of the fifth nerve, called trifacial or trigeminal neuralgia, is one of the most frequently occurring neuralgias. One would expect this, considering the number of branches of this particular nerve, its exposed situation and important function. One branch alone or all branches at the same time may be involved. Supra-orbital neuralgia is the most frequent form, however. Pain is felt markedly in the supra-orbital notch and extends over the forehead as far back as the parietal bone. Just above the notch the nerve is tender, and also at the outer part of the upper eyelid. Sometimes the pain seems to be in the eye itself. Pain is usually the result of exposure to cold.

Infra-orbital neuralgia is usually associated with neuralgia of the other branches of the fifth nerve, but may occur alone. Pain and tenderness are felt at the infra-orbital foramen. This form is usually met with in people at thirty-five or forty years of age, and is ofttimes very intractable, requiring in extreme cases excision of the nerve.

Patients most often complain of neuralgia of the maxillary division of the fifth nerve. As a rule, the pain is felt in the lower jaw and teeth, sometimes darting into the upper set of teeth. The nerve is tender at its emergence from the infra-orbital canal and mental foramen. Any motion of the jaw, mastication and speaking, are painful. The teeth seem loose in their sockets and hurt when pressed upon. Salivation occurs; the cheek swells and herpes may develop about the angle of the mouth, eyes and lips. Frequently the attacks are unbearable.

Intercostal neuralgia is most frequent in women who are hysterical and anemic. The pain is often constant and exaggerated by breathing and motion of the ribs. Lumbar, plantar neuralgia, coccyodynia and painful heel are other forms of neuralgia.

In occipital neuralgia the pain is felt in the terminal branches of the occipital nerve. The area supplied by this nerve is the posterior portion of the head; branches of the first four cervical nerves are affected simultaneously. This form, as well as the cervico-brachial and neuralgia of the phrenic nerves, is rare.

Sciatica, or sciatic neuralgia, is another form which the physician is frequently called upon to treat, and often taxes his ability to the utmost. Always convince yourself whether you are dealing with a neuritis or a functional neuralgia. Neuritis is the most common cause of sciatic neuralgia, and may depend upon rheumatism. It occurs more in males than females, generally after forty years of age. Exposure to cold and wet, sitting on cold stone, exposure to draughts while the clothing is wet, and heavy muscular exertion are the most common causes. Exostoses, ovarian or uterine tumors, pressing on the sacral plexus, may cause neuralgia. Pain usually comes on gradually in the back of the thigh, gradually extending down the leg into the foot, over the entire distribution of the nerve. Patients can point out painful spots along the course of the nerve, usually just above the popliteal space, at the sciatic notch, at the upper external condyle of the fibula and the lower part of the leg. Pain is described as a constant gnawing or burning, sometimes intermittent, and worse at night. Flexion of the thigh on the abdomen elicits pain. The patient usually walks on his toes and flexes the knees slightly, so as to relieve the tension on the nerve. Some patients only have pain at the sciatic notch, on the sole of the foot or in the heel. Hyperesthesia may be present along the course of the nerve and its distribution. Tickling and anesthetic patches on the thigh and leg are met with. In long-standing cases the muscles of the calf become atrophied, flabby and weak. Sciatic neuralgia is most likely to occur in

patients who are weak and anemic. In sciatic neuritis there is more tenderness over the nerves and more sensory disturbance.

TREATMENT.

The general indications are:

First, to relieve the pain either by absolute rest with fixation of limb or part affected. Warm baths and hot poultices or the hot iron, thermo-cautery, blisters, give temporary relief. Deep injections of cocaine or morphine, in one-eighth to one-third grain doses, and injections of chloroform into the nerve, have been recommended.

Second, tumors and exostoses must be removed when present.

Third, the internal administration of aspirin, salophen, or the salicylates, when rheumatism is present or gout, is the causative factor. Iodide of potassium in large doses in syphilitics. For some time past I have used salophen and found that in most cases it superseded all other antineuralgics, and many of my professional friends have been using it for the same purpose. This drug can be given in doses of from fifteen to thirty grains without fear of any toxic effect. Being tasteless and odorless patients do not object to its use. There is no nausea, vertigo, tinnitus aurium, cardiac depression or indigestion.

For the immediate relief of pain the initial dose should be from fifteen to thirty grains, followed in severe cases by fifteen grains every two hours, until relief has been obtained; then fifteen grains four times a day to keep up the effect. In mild cases ten to twelve grains every two hours usually suffice. Children are given from two to ten grains every two, three, four, or six hours, according to the age. In conjunction with the treatment I usually give small doses of calomel and ipecac in alternation to arouse the secretions of the alimentary tract, as well as to promote elimination. After the acute symptoms have subsided it is advisable to continue giving salophen in fifteen grain doses four times a day for four to six successive days. I have found that pursuing this course of treatment prevents recurrences. The cause underlying the attacks should always be treated by those means which the physician judges to be indicated for the case, such as filling decayed teeth or correcting a blood dyscrasia. From the foregoing remarks it is evident that salophen is a very valuable and reliable aid in the treatment of all forms of neuralgia.

THE VALUE OF ADRENALIN AS A STIMULANT.—Drs. May S. Miles and William Muhlberg (*The Cleveland Medical Journal*, December, 1902), as a result of numerous experiments, reach the following conclusions:

(1) Adrenalin may be of value in cases of so-called heart-failure occurring during anesthesia, etc., especially when the ordinary heart-stimulants, such as strychnin, digitalin, and normal saline solution, fail.

(2) That it is more likely to succeed in those cases in which the respiratory centers are not paralyzed, since adrenalin does not appear to be a very powerful respiratory stimulant.

(3) That, when used, it should be given subcutaneously and the site of the injection should be slowly but strongly massaged until the adrenalin shows its characteristic effect on the pulse.

(4) That dilution with normal saline solution (10% of the 1/1000), by making absorption slower, causes a more prolonged and a less energetic rise of the blood-pressure.

(5) That, while our experiments do not permit us to draw any conclusion in regard to bad after-effects, these were not observed in our animals. The danger from secondary hemorrhage as a result of the high pressure must, however, be borne in mind.

(6) Adrenalin subcutaneously is indicated on theoretic grounds for the vasomotor collapse following cocain or chloroform poisoning, and possibly the shock after operation.

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Editorial.

PUERPERAL SEPSIS AND FORMALIN.

The most efficient treatment of puerperal septicæmia is still *sub judice*, extreme views as to the best procedure being held by the different authorities. The advisability of curettement in these cases is being most carefully considered, and the indiscriminate use of the curette, as soon as the diagnosis has been made, is no longer sanctioned or resorted to by progressive physicians. While no argument can be advanced against such cleansing of the uterine cavity, when the secundines or any part thereof have been retained with subsequent decomposition and toxic absorption, the futility of such intervention when the uterus is empty is apparent, since it serves only to open up fresh sinuses for the absorption of by-products into the general circulation. The curette is not a panacea for these desperate cases. At the right time and in the proper place it will prove of inestimable value, just as it will produce incalculable harm if improperly applied. Medical progress aims at prophylaxis, not only in the maintenance of absolute cleanliness, but also, as suggested by SOLT, in the administration *post partem* of small doses of ergotine. By contracting the uterus and thereby narrowing the lymph spaces and blood vessels, the exudation of lochia is hastened and infection from without is minimized. Recently the intravenous injection of 600—750 cc. of a 1-5000 solution of formalin has been tried by BARROWS, of New York City, with success. Several other more or less successful trials have been reported, but the total number is too few to formulate any definite conclusions. Reported cures of other septic conditions — septic endocarditis, for example — by the intravenous injection of a one per cent. solution of collargol have been recorded by CREDÉ, WENCKEBACH, KLOTZ and HERRICK, while MANGES reports failure with its use. Leaving aside all theoretical considerations of disintegration of the red blood cells, the uncertainty of the amount of toxin absorbed, and therefore the problematical use of the quantity of antiseptic, the successful use of formalin in these few desperate cases marks an advance in the treatment of puerperal sepsis and places in our hands another line of treatment for apparently hopeless cases. It is not claimed that every case of puerperal septicæmia requires such heroic treatment, nor is it stated that all cases will respond to its use. When used, however, as a *dernier resort*, and then with brilliant success, it is not to be wondered that enthusiasm is aroused. Meanwhile experimentation is being carried on actively, and very soon the merits or defects of the method will be known. Whatever be the ultimate verdict of observers, some encouraging results have been attained with the intravenous injection of formalin solution.

THE NAMES OF KOLLER AND CORNING will ever be remembered with a sense of gratification by the surgical world, the former for his discovery of cocaine as a local pain-relieving agent, the latter for his application of the drug by hypodermatic injection. Time has shown that this drug, even when administered in small and apparently non-toxic doses, may produce alarming and occasionally fatal collapse.

It is not surprising, then, that many attempts have been made to produce a drug which would possess every advantage of cocaine as a local anesthetic and yet be devoid of its dangerous possibilities. Dr. F. C. Floeckinger, from his experiments and observations with nirvanin, is inclined to the view that this preparation, being "ten times less toxic than cocaine" and no less efficient in relieving pain, is entitled to first consideration in local anesthesia.

The Sequelæ of Purulent Ophthalmia are so disastrous that no time should be lost in treating the case thoroughly and energetically at the very outset. Silver solutions have long held the field in the therapy of this condition, and the method of Credé for the newborn has proven a prophylactic of inestimable value. Hansell, however, has found that solutions of potassium permanganate, in strengths of 1-600 to 1-2000, prove the most beneficial antiseptic for these cases, thus doing away with the pain so frequently attendant upon the instillations of silver. Whatever means are employed, however, must be persisted in patiently and systematically if ever we hope to preserve the sight of these unfortunates.

Scarlatinal Throat.—A solution of boric acid is a good throat antiseptic. This may be used as a gargle or a spray, or it may be put up in the form of a lozenge flavored with peppermint or some other agreeable substance, together with sugar, for the use of children.

A solution of permanganate of potassium is one of the most efficient antiseptic nose and throat sprays that can be used in scarlatinal or any other form of sore throat. Its only drawback is that it becomes extremely objectionable to many people after two or three days' use.

One or two per cent. menthol in oil or vaseline will ease the itching of scarlatina if applied to the affected parts at suitable intervals.—*Maryl. Med. Jour.*, Oct., 1902.

THERAPEUTIC NOTES.

Breuer considers diuretin, in doses of half to one drachm daily, very valuable in the treatment of angina pectoris.

Ten drops of a twenty per cent. solution of menthol in olive oil are claimed by Weil to control the nausea and vomiting of pregnancy.

In ulcus ventriculi nitrate of silver, in combination with hyoscyamus, is efficient.

A three-minim pearl of amyl nitrate, inhaled at the beginning of an attack of angina pectoris, will afford prompt relief.

For dysmenorrhea Stinson advises one grain of thyroid extract three times daily for a day or two before the expected flow, and two grains three times daily during the period.

In nocturnal enuresis Delfosse has obtained good results from the installation into the urethra of ten to twenty drops of a three per cent. solution of silver nitrate.

Hare considers physostigmine a uefusl drug in atony of the bladder or intestines.

A lotion of nitric acid (one-half drachm to a pint of water) relieves the distress and hemorrhage of hemorrhoids, says Ringer.

A physician in Berlin has found the local application of benzine very useful for nasal erythema.

Mayer has employed turpentine oil in doses of several drops, three or four times daily, with considerable success in appendicular inflammation. It is best administered in the form of emulsion or with brandy, cinnamon, or sugar.

For laryngeal tuberculosis, Coulter uses a twenty per cent. solution of guaiacol locally.

Calcium chloride in daily doses of half a drachm is recommended by Lafond for menorrhagia.

Current Literature.

INTERNAL MEDICATION IN GONORRHEAL URETHRITIS.—George Heaton (*Indiana Medical Record*, April 23, 1902) is credited with the following: During the incubative and the early part of the acute inflammatory stage, the various oleo-resins should be avoided. Treatment should begin with a brisk purge. When there is fever and much constitutional disturbance, aconite in small doses with an alkali is useful. In less severe cases a mixture of soda bicarb., mag. sulph., tinct. hyoscyamus, with either infusion buchu or liq. ext. of kaka-kava, may be employed. Erections of the penis at night are best treated by the use of a hard mattress, and by giving a small and early supper and preventing the patient sleeping on his back. As sedatives—chloral, bromides, camphor, and opium are useful. A very efficient suppository is one containing camphor gr. ii, ext. belladonna gr. i, ext. opii. gr. ii, put in the rectum before going to bed; or a urethral injection of liq. morph. 10 min., cocaine hyd. gr. ¼. When the inflammatory stage is beginning to abate, the oleo-resin may be given alone or combined. Sandalwood oil is least liable to disturb the digestion, but it is generally given in capsules, or if in a mixture, combined with liq. potassæ; saw-palmetto as a dry extract, in doses of two or three grains, or in fluid extract in one or two-drachm doses, has a considerable reputation, and methylene blue has of late been much extolled.

UROTROPIN IN SOME URINARY INFECTIONS.—J. Odery Symes (*The Bristol Medico-Chirurgical Journal*, March, 1902) states that the best results with urotropin are seen in cases of cystitis secondary to enlargement of the prostate, probably because in such cases the urine on leaving the kidney is acid, and the bladder walls are not deeply penetrated by bacteria. The antiseptic body formed by the urotropin first inhibits the growth of and then kills the bacteria, which give rise to the alkalinity of the urine; and the bladder, freed from this source of irritation, will, if the drug be resumed from time to time, remain permanently in good working order. Presumably cystitis secondary to stricture of the urethra would give equally favorable results.

Cases of cystitis secondary to gonorrhea will not, in my experience, do well on urotropin. The symptoms are relieved, and the patient continues to take the drug because of the relief; but in two cases under my care, in both of which the urine was originally alkaline, it was possible to detect organisms in the acid urine after the drug had been taken more or less steadily for in one case five, and the other six, months. Cessation from urotropin in such cases generally means a return of the symptoms.

Cystitis due to B. coli, accompanied with acid urine, such as is seen so frequently in women, does not yield readily to urotropin, probably because this organism is peculiarly resistant to the drug. I have found freely motile bacilli in the urine of a patient suffering from vesical coli infection, who, for twelve days previously, had been taking ten grains of urotropin three times a day.

My custom has been to give urotropin in doses of ten grains four times daily, the last dose on going to bed at night. In none of the cases reported has hematuria been noted.

ACUTE EXUDATIVE NEPHRITIS.—Delafield says: The way we manage these patients is to put them to bed or keep them in the house till the nephritis has run its course. They are kept on fluid diet, preferably milk, and the skin of the entire body is cleaned once a day. For many cases no other treatment is necessary. If vomiting is troublesome, it can usually be controlled by adding cerium oxalate and sodium bicarbonate to the milk. For the restlessness and sleeplessness chloral hydrate, the bromides, or opium may be employed.

If the nephritis is of severe type, the patient is wrapped in a blanket wrung out of hot water and kept in it for one hour once or twice a day. In addition we give one drachm (gm. 4.0) of sulphate of magnesium every hour until the patient has taken eight doses or the bowels move, or calomel, gr. ¼ (gm. 0.015 every) hour for 6 doses, or till the bowels move. This is followed by one or two minims of tincture of aconite every hour. Throughout the disease we watch the pulse, and, as soon as it shows any increased tension, give chloral hydrate in doses of from two to five grains every three hours. If severe headache, muscular twitchings, or general convulsions occur, to most of the patients we give chloral hydrate, gr. v-xx (gm. 0.3-1 3) by rectum, or nitroglycerine gr. $^1/_{200}$-$^1/_{50}$ (gm. 0.003-0.012) hypodermically, or morphine gr. $^1/_{10}$-$^1/_6$ (gm. 0.006-0.01) hypodermically. In strong and robust adults with a good deal of venous congestion, general blood-letting may be advisable. For the relief of the convulsions urethane in solution, in repeated doses up to 100 grains (gm. 6.6) in twenty-four hours, is said to be of service. As the nephritis subsides, the milk is gradually replaced by solid food, and iron and oxygen are given.—*Medical News*, Aug. 30, 1902.

Diabetic Specifics.—At a meeting of the Chicago Academy of Medicine, June 27, 1902, Dr. D. R. Brower (*Medical News*, Aug. 16, 1902) pointed out that of necessity there was no specific for diabetes, since conditions indicating treatment were manifold and needed relief more than the glycosuria *per se*. Insomnia was a distressing symptom which often yielded to hydriatic procedure. He had found the combination of chloral hydrate and sodium bromide the best hypnotic. Some of the crises of locomotor ataxia were accompanied with glycosuria. What might be called the neurasthenic neuroses of diabetes mimicked every one of the great neurosis. Tabetic reflexes, including the light reflex, were sometimes found in diabetes. The amount of urine passed at the outset of coma was sometimes enormous. Some of the English clinicians had observed cases in which four gallons had been passed *per diem*. The largest amount he had observed was three gallons. He had found strychnine to be of value in the air hunger which is such a marked feature of diabetes as well as other suboxidation states. Heroin in one-sixteenth grain doses was an excellent substitute for morphine since it locked up the secretions less, quieted the general irritation better and decreased the sugar more. The general mental state of the diabetic was a capricious, apathetic, good-humored irritability. This state, like the slightly similar but more suspicional state of the consumptive, interfered greatly with continuity of treatment. Sometimes the coma was disguised by a stuporous melancholia, in which the seemingly unconscious patient had psychic nausea, depressing delusions and depressed emotionality. It was in just such a case that opium acted well, and heroin had here shown itself the best of the opium preparations. Trional and sulphonal might set up kidney strain, and hence were often contra-indicated. All coal-tar preparations were dangerous because of their tendency to produce cardiac depression. In constipation which tended to increase diabetic discomfort aloetic purges and colonic flushings were indicated. He had seen extreme obstipation followed by a fecal tumor produce temporary diabetes, which disappeared on colonic flushings that removed the tumor. Rigorous diet was injurious. The distress produced worse results than the benefit from decreased glycosuria could compensate for. All of the alteratives had proved of benefit in luetic, lithemic and allied states. Gold chloride and guiacum were of benefit. Pancreatine and papain were of service. Where opium is indicated, the extract of opium was preferable to morphine. Thyroidin and adrenalin were of doubtful

value in most cases. Diabetic patients should always be watched for the appearance of acetone, diacetic acid and oxybutyric acid, which indicated the onset of coma. Here sodium bicarbonate should be given in great quantity, hypodermically if necessary. Potatoes were allowable because of the quantity of water they contained, and also because they tended to increase alkalinity, and also led to an undue collection of fat.

TREATMENT OF CHRONIC NEPHRITIS.—I. N. Danforth (*The Clinical Review*, November, 1902), in an interesting paper on this subject, says: The first and most important indication in the treatment of renal disease is to minimize the work of the kidneys, and, so far as possible, to place them in a state of "physiological rest." To this end their duties as scavengers should be lessened by diminishing (but not prohibiting) nitrogenous diet, by limiting the patient's physical and mental work to a safe standard, and by requiring the other great scavengers of the body—the skin and the liver—to do extra duty while the kidneys are in quarantine. The bowels should also be called into requisition, both as a derivative and eliminating tract, by the frequent and systematic use of mild salines in strong—almost saturated—solutions, whereof the most useful are certainly the sulphate of soda or the sulphate of magnesia. I use the old-fashioned term "derivative" on purpose and with an object; by inviting a flow of blood to the intestinal tract by means of salines, I expect to relieve the engorged blood vessels of the kidneys, since the same blood cannot be in two places at once, and I have many times seen abundant proof of the benefits of this practice.

The use—or usefulness—of diuretics in Bright's disease raises a very important question. I employ diuretics in nephritis about as I use aperients in intestinal inflammations, not as curative agents, but simply for the purpose of preventing accumulations of waste or necrotic material, and of promoting freedom of circulation and activity of nutrition. The saline diuretics, in small doses, largely diluted, and given during fasting (a very important point), are most certain to give positive results. But no active or stimulating diuretics should be employed except in emergencies which cannot be met otherwise.

The heart has great reason to complain of being over-stimulated in nearly all cases of Bright's disease. It grows out of the erroneous notion that digitalis is a diuretic *per se*, and that diruectics are indicated when the kidneys are inflamed. Cardiac tonics and stimulants should *not* be used in renal diseases, unless there is direct call for them from the heart itself.

COPPER CITRATE IN TRACHOMA.—*Merck's Archives* (September, 1902) states that, encouraged by the excellent results of using silver citrate in place of silver nitrate, Dr. F. v. Arlt (*Klin. Therapeut. Wochensch.*, Bd. ix, No. 15) has tried to substitute the citrate for the sulphate of copper in the treatment of trachoma. Copper citrate is a green, very light powder, containing about 35 per cent. of copper. It is employed in the form of an ointment (5- to 10-per cent strength), which may be put up in tubes and expressed drop by drop into the eye. The lids are then closed and massaged for half a minute. The pain experienced is very slight. The procedure is repeated two to three times daily. The eyes may be washed an hour after the application.

This treatment can be carried out by the patients themselves. The effect on pannus of trachomatous origin is startling. In seven to twelve days the opacities disappear. The conjunctival alterations also show a marked improvement after one or two weeks' treatment, the secretion becoming less profuse and the granules or follicles diminishing in size. No scar-formation takes place. In severe cases this treatment may be reinforced by applications of silver citrate.

PANSY TEA IN OBSTINATE ACUTE VULGARIES. —*The Medical Standard* (October, 1902) states: When all other forms of treatment failed Behrman (*Dermat. Centralbl.*) found that a decoction of the pansy leaf, herba viola tricolor, favorably influenced the disease. The herb contains among other things salicylic acid and magnesium tartrate. The heat of the tea and the action of the salicylic acid stimulate the sweat glands and facilitate their excretion. The dried horny plugs in the sweat glands are dissolved by the acid and the function of the gland thus restored. The magnesium tartrate produces free catharsis, thus cleaning out the intestinal tract and preventing any further absorption of putrefactive poisons. The tea is easily prepared, cheap, agreeable to take and very effective. The patient must be kept under observation, as impetigo may result. Otherwise the results are in every way favorable.

UNEXPECTED RESULTS FROM DRUGS.—Sir Lauder Brunton (*British Medical Journal*, October, 11, 1902) states that quinine may act very differently according to the amount of acid in the stomach. In tropical countries quinine is frequently swallowed by the teaspoonful, and a great part of this is often wasted because there is an insufficient amount of acid in the intestinal canal to dissolve it. Should, however, a patient take quinine in this way and have several lemon squashes immediately afterwards, so much quinine may be dissolved by the citric acid they contain as to give rise to unpleasant effects. Calomel again may vary unexpectedly in its effects. In persons who live upon a vegetable diet and are accustomed to take but little salt, calomel appears only to have a slight action; but those who take a lot of salt, or are accustomed to live upon salt provisions, a larger quantity of calomel is converted into corrosive sublimate, and thus an unexpectedly violent action may be produced. Sulphide of antimony, on the other hand, is dissolved by alkalies, so that, when compound calomel pills, which contain this drug, are given along with alkalies, a degree of gastro-intestinal irritation may be produced which does not occur in other conditions. The solubility of certain resinous purgatives, such as aloes, scammony, jalap and podophyllin, is also much increased by alkalies, and some of the unexpected excess or lack of action of these drugs, which occasionally manifests itself, is doubtless due not to the impurity of the drug, but to the amount of alkali present at the time in the intestinal canal.

MUMPS.—

℞ Spir. aetheris nitros. ..... ʒ ij
Liq. ammon. acetatis,
Glycerini .....āā ℥ ss
Aquae cinnamomi .....q. s. ℥ iij
M. Sig. ʒ i q. ʒ h. —CRANDALL.

CREOSOTAL.—Dr. C. S. Sewening, of Werther (*Deutsche Aerzte-Zeitung*, Berlin, October, 1902), publishes the good results which he has obtained from the drug in some affections other than pneumonia. Amongst others he reports a case of catarrhal cystitis in a surveyor who had worked for several years in a wet coal mine, and whose urine formed a thick, mucilaginous deposit in the chamber. He prescribed:

Creosotal 4 grams (1 dram)
Ol. oliv. 200 " (6-2/3 ozs.)

After he had taken this mixture two to three times a day in tablespoon doses for eight days, his urine became permanently clear.

Another case was that of a young farmer, who came to him about a year ago complaining of a dirty discoloration of the face, hands, etc. He gave:

Creosotal 4 grams (1 dram)
Ol. jecor. 200 " (6-2/3 ozs.)

directing him to take a teaspoonful of the mixture three times daily. After he had taken the medicine twice the spots disappeared, and they have not returned to this day. The man's general condition, also, is perfectly normal.

OTITIS MEDIA PURULENTA.--Lacroix (*Arch. Internat. de Laryng., de Rhinol., et de Otel.*) says: A saturated solution of picric acid (1 to 87) affords most satisfactory results in the majority of forms of suppuration of the middle ear. Picric acid is not only a good antiseptic and mild analgesic, but it favors epidermization in a marked degree. A good formula is

℞ Picric acid ..... 3 grains
Alcohol (90°).....45 minims
Distilled water..... 5 drachms

Twenty minims may be instilled, warm, night and morning, and permitted to remain for five minutes. The mucosa is found to be covered with epidermic *débris* after use of the foregoing, and copious irrigation is necessary to cleanse the ear. The solution should be applied daily in order to prevent accumulations of coagulated albumin. Usually the application of the solution causes the discharge to cease in a few days, and perforations readily heal; but in chronic cases complicated with caries, though the results are good, the treatment requires to be prolonged. It is inadmissible where there is acute inflammation or an eczematous condition of the meatus, and also (owing to its tendency to promote desquamation and hardening of *débris*) where cholesteatoma is to be feared. It is unfortunate that the acid stains the skin a bright yellow, but this stain is easily removed by a saturated solution of carbonate of lithia. —*Indiana Medical Record*, April 2, 1902.

ACUTE INFANTILE BRONCHO-PNEUMONIA. — J. L. Steven (*Lancet*, September 20, 1902) says that the important point in the treatment is the prophylaxis. It is to be remembered that every common cold or bronchial catarrh, or gastro-intestinal disorder, in a young infant may pass into the exceedingly serious and fatal disease of broncho-pneumonia. It is obvious then that everything should be done to prevent such an occurrence. No indisposition in an infant should be regarded lightly. The child should be carefully treated and not lost sight of till all symptoms of initial disorders have passed away. In particular the mother should be warned of the danger of exposing the child to cold, and of the necessity of keeping him or her warmly, though not heavily or tightly, clad. A gastro-intestinal derangement should be corrected by careful directions as to diet. In the presence of the acute disorder itself the most important point to bear in mind is the fact that we are dealing with an acute generalized inflammatory disease of the respiratory apparatus, the immediate tendency of which is to produce great exhaustion of the vital powers. The disease is very essentially one of debility, and treatment should aim to maintain nutrition and stimulate the failing heart. All the measures tending to depress the child should be strictly avoided, and for this reason emetics are not to be used. Place the child in an airy room, well warmed, and if it can be easily managed, let the air near his bed be moistened from the steam of a bronchitis kettle, which will often be found to have a marked effect in soothing a cough. Do not load him with clothes to keep him warm, and avoid compression of the chest and abdomen by flannel binders. Two or three plain linseed poultices in the course of twenty-four hours, applied back and front, are often of service as mild counter-irritants. Feed the child with milk diluted or peptonized, and check diarrhea by subnitrate of bismuth, combined if necessary with one or two Dover's powders. Alcoholic stimulants are almost always necessary, but they should be strictly supervised by the medical practitioner, ordered by him as occasion demands, and prescribed in minims, not in drachms. A mixture containing from half a grain to a grain of carbonate of ammonia and two minims of digitalis in each dose, made up with syrup, may be given every three or four hours. The child should be constantly watched by a competent nurse, and should be occasionally held up to relieve breathing. —*Medical Age*, October 25, 1902.

Furunculosis.—M. P. Desfosses (*Presse médicale*, July 9, 1902) says that, when it is not possible to abort a furuncle, a prolonged hot bath, when the furuncle is favorably situated, will soon mitigate the pain. Hot compresses of bichloride of mercury, one to 2,000, covered with oiled skin or rubber tissue and changed four or five times daily, will relieve pain and hasten suppuration. Incision the author regards as the proper treatment when the furuncle has reached its full development. A deep incision with a bistoury or a crucial incision may be made, according to circumstances. As to general treatment, saline purges may be useful, while arsenic, the alkalies, and intestinal antiseptics are recommended. Brewers' yeast, in doses of a teaspoonful three times daily, acts very well and sometimes prevents the formation of new furuncles, but its effect is not always constant. Prophylactically, frequent washings of soap, with alcohol and minute attention to the cleanliness of the skin, are advised.—*Carolina Medical Journal*, October, 1902.

Diphtheria Antitoxin.—H. Judson Lipes (*Albany Medical Annals*, November, 1902) says: No more wonderful discovery in the realms of medicine was made in the nineteenth century than that of the antitoxin of diphtheria. The results that have thus far been obtained in the treatment of this dreaded disease with the antitoxin have been exceedingly favorable. The mortality from diphtheria has been reduced about half under the influence of this therapeutic measure. Reliable statistics show that in the cases submitted to treatment with antitoxin the disease pursued, in general, a milder and more favorable course. In cases seen, after the disease had progressed several days, existing manifestations of stenosis improved in a large number of cases, so that tracheotomy or intubation was avoided. Serious sequelæ with certainty attributable to the antitoxin have thus far not been observed.

The good effects of the antitoxin are experienced, no matter whether the diphtheria membrane exists in the nose, pharynx, vagina or uterus (Croffi), or in any other locality.

Personal prophylaxis by means of injections of antitoxin is being employed more frequently, but not so much as it should be done. The main objection that has hitherto stood in the way of its more frequent use was the fear of disagreeable complications due to the serum. With the present highly concentrated antitoxin, however, there need be no fear. The writer has used even as high as two thousand units as a prophylactic measure without any ill effects whatever.

By means of the modern prophylactic and curative treatment, diphtheria (now one of the more common of infectious diseases) will, in the not distant future, become one of the rare diseases.

Potassium Permanganate in Purulent Ophthalmia.—Hansell, in the *Therapeutic Gazette* for May, has an interesting paper on the use of potassium permanganate in the treatment of purulent ophthalmia. The author believes it the best and most beneficial antiseptic in use for these cases. Solutions having a strength of 1-2000 were used and gradually increased up to 1-600. In severe and recent cases a strength of 1-600 is used to begin the treatment. The eye is irrigated with a rubber nozzle attached to a douche bag for five minutes at a time and the solution guided into all portions of the subjunctival sac and allowed to discharge over the side of the face on a rubber sheet and thence into a receptacle. The solutions are used every twenty minutes in severe cases for the first twenty-four hours and gradually lessened both in time and amount according to the progress of the case. The staining of the face is of little account and is easily removed with oxalic acid. Moreover the solution stains any abrasion of the cornea just as fluorescine does.—*The Canada Lancet*, November, 1902.

TREATMENT OF TYPHOID FEVER WITH CASTOR OIL.—C. C. Bass (*St. Louis Medical Review*, November 25, 1902) describes his method as follows: Taking tympanites as my guide, my object was to keep the bowels as free as may be of germs, toxins and fermentation. When I first began the use of the treatment, I gave one dose of castor oil every twenty-four hours. I found that, after giving a dose, tympanites was partially or wholly relieved, but that it usually began to return before time for the next dose. I also found that the typical typhoid odor of the stool, while it was perhaps partially, was never altogether relieved. I then began to give a dose every twelve hours, and found that, in from one to three days, these conditions were entirely removed, the stool was rid of the typhoid odor and was as odorless as that of a healthy man. The presence or absence of the typical odor of the stool became at once another valuable guide in the treatment. These two results: (1) Bowels free from tympanites and (2) a stool free from the odor, indicating a satisfactory condition in the canal, can be had by administering a dose of castor oil every twelve hours, but they cannot always be had by less than that.

A dose of castor oil is an indefinite quantity, especially in the treatment of typhoid fever. It varies in different cases, and in different stages and conditions in the same case. It may vary from one to eight drams. Enough to act in three to five hours should be given, but not so much as to act more than twice. If the patient is seen in the first week, when constipation usually exists, the dose will be two to four drams; but if in the second or third week, when diarrhea is the rule, one to two drams will be the proper dose. After one or two doses have been given, it can be easily regulated. During the second and into the third week, the dose is about the same, but increases considerably during the last week in the bed. In abortive cases, the dose is usually larger all through the course of the disease. The taste is very well disguised by giving it in a warm cup with a little boiled sweet milk.

FRANKLINIC ELECTRICITY IN ALOPECIA.—Drs. R. Pivani and J. Blasi (*Annali di Elettricita e Terapia fisica*, April, 1902) give descriptions of several cases of very severe alopecia in which the employment by static electricity had given the best results. In four cases this mode of treatment was successful; in one unsuccessful. The successful cases were all cured, and this after about twenty or thirty sittings. The patients were submitted to the electric bath, and sparks were discharged on the smooth, hairless patches. The treatment is certainly worth a trial in these cases, though we imagine that many cases will prove less amenable to such measures when made use of on a large scale. It should not be forgotten, too, that falling-off of the hair, apart from alopecia areata, is sometimes succeeded by an equally rapid and abundant new growth, which occurs spontaneously; hence, mistakes may arise as concerns the efficacy of treatment.—*Treatment*, September, 1902.

SEPSIS FOLLOWING ABORTION OR LABOR.—Henry (*Medical News*, May 24, 1902) summarizes as follows:

1. Remove early with the finger, sharp curette, and flushing, all debris, decidua, blood-clots and sloughing tissue which may be infected, from the uterus and from all raw surfaces of cervix, vagina and vulva.

2. Dry all of these raw surfaces and apply freely to them the 95 per cent. carbolic acid, washing away the surplus with sterile water.

3. Unless hemorrhage require, leave no tubes or packing of any kind in either vagina or uterus.

4. Have a simple carbolized 2 per cent. vaginal douche used twice a day.

5. Open the bowels freely with calomel (½ grain every hour for four hours), to be followed by Rochelle salts until sufficient action has occurred.

6. Give quinine, 3 grains every four hours, followed by tincture of the chloride of iron, 15 drops, in water.

7. Give good nourishment, with milk, eggs, and stimulants, every four hours.

8. Let this be the routine early treatment.

9. When fixation of the uterus occurs and infiltration takes place in Douglas' cul-de-sac or in the broad ligaments, or when the tubes or ovaries fill with pus in acute cases, open promptly and drain through the vagina.

10. If multiple abscesses occur in the uterine walls, if the walls become badly infected, or if necessary in order to secure perfect drainage for a badly infected pelvic cavity, remove the uterus and all else necessary by the vaginal route.—*The Southern Practitioner*, November, 1902.

Injections of Supra-renal Capsule Juice in Addison's Disease. — *Treatment* (September, 1902) abstracts the following from a paper by Dr. Hirtz, in *Revue de Thérapeutique Medico - Chirurgicàle* (July 18, 1902):

The author gives the details of two cases, both of which were treated by the juice of supra-renal capsules. In the first case the symptoms were well marked and the skin very dark in color, being in some regions of ebony black tint. The pulse was weak, 110, and the patient was extremely feeble. There was also considerable œdema of the legs and scrotum. The treatment by supra-renal juice was most successful. The juice was administered by injection. In less than a month there was considerable recovery of strength, and the physical signs of phthisis, from which disease the patient was suffering, became much less marked. Weight was gained, and the patient's appetite became better. The history of the second case was very similar, and it was particularly striking that the previously deeply pigmented skin regained more or less its normal aspect. Indeed, the hands and forearms lost all traces of abnormal coloration. In three weeks the strength of the patient had greatly increased, and he was able to sweep out the ward. In view of the fact that diverse and contradictory results have been obtained from the action of supra-renal extract in Addison's disease, it is important that the history of cases in which good results have followed the treatment should be carefully recorded. The results obtained by the author were at all events temporarily satisfactory, and this is more than can be said for those obtained by other varieties of treatment.

Treatment of Syphilis. — J. C. Paine (*Peoria Medical Journal*, January, 1902), in an article on this subject states the following:

(1) *Inunctions.*—In this method a half to one drachm of mercurial ointment is thoroughly rubbed into one of the flexor surfaces of the body at bed-time. First, the flexor surfaces of both arms, then each side of the chest, then the abdomen, and finally the flexor surfaces of both thighs, choosing a new place each night. The part must first be cleansed with soap and warm water in the morning. After a course of six inunctions the patient is instructed to take a warm bath, put on clean underclothes, rest a day, and then commence over again. Twenty or thirty inunctions are sufficient in starting the treatment.

(2) *The Internal Medication.* — This is the most popular and frequently used method of administering mercury: first, the proto-iodide of mercury in one-fourth to one-grain doses; second, the bin-iodide in $^1/_{16}$ to $\frac{1}{8}$ grain doses; third, mercury and chalk in 2 to 4 grain doses; fourth, the tannate of mercury in one-grain doses; fifth, bichloride in $^1/_{20}$ to $^1/_{10}$-grain doses; sixth, mass of mercury in 2 to 4 grain doses, are the most frequently prescribed preparations and are preferably administered in pill or tablet form after meals. It is best to commence with the smaller dose and gradually increase,

watching for signs of salivation. Start your patient out, say, with ¼-grain tablets of the proto-iodide taken after meals three times a day and tell him to increase one tablet every other day until he is taking two tablets after each meal. An average case will easily take ½ a grain of the proto-iodide or $^1/_8$ of a grain of the bin-iodide if administered in this manner. It is imperative that full doses be given, as a vigorous course of treatment for six months is *much* more *valuable* and *effective* than a long-drawn-out course of treatment with small doses. Do not give the same preparation of mercury continuously. Give one month of the proto-iodide, then a month of the tannate of mercury, then a month of mercury and chalk, etc.

Nose-Bleed.—Hanan W. Loeb (*St. Louis Medical Review*, October 4, 1902) says among other things that of all styptics for nasal work there is one which may be used without fear of infection, namely, peroxid of hydrogen. I have been accustomed to use it to arrest the slight superficial oozing which sometimes remains after the finger pressure had been applied. A small pledget of cotton saturated with the agent is placed lightly in the vestibule and permitted to remain there for a few moments. Besides its hemostatic action, it decomposes the surface clots and renders the nose free from obstruction. After the cessation of the hemorrhage I use a few drops of the peroxid of hydrogen in the nose every few hours, for its action in decomposing the hardened and dried masses of blood and nasal secretion, which rapidly collect and fill up the nose and which so frequently start the hemorrhage anew.

In this connection it may be well to mention one of the newer remedies which has lately come into vogue, viz., suprarenal gland. This agent has the property of blanching a mucous membrane to which it is locally applied, by powerfully stimulating the vaso-constrictors. The consequence is that almost all the blood leaves the part, causing naturally an immediate cessation of the hemorrhage. This action continues as a rule for about two hours, after which there is a somewhat greater tendency to recurrence of the bleeding; the application is of benefit whenever a clot forms in the bleeding vessel sufficiently firm to hold when the full blood pressure returns somewhat increased by the secondary dilatation of the blood vessel. It is of special service in those cases where the bleeding point cannot be reached by pressure directed upon the ala nasi, and in the form of the salts of its alkaloid, adrenalin, it may be used even in these cases.

Mercurial Stomatitis.—

℞ Liq. plumbi subacet..... ʒ j
Aquæ..... q. s. ℥ viij
M. Mouthwash. —S. D. Gross.

Cystitis.—*The Surgical Clinic*, January, 1902, mentions the following as conclusions of Belfield:

Pot. permanganate against colon bacillus.

Corrosive sublimate against staphylococcus, streptococcus, typhoid bacillus and tubercle.

Zinc chloride against tubercle bacillus.

Cupric sulphate against gonococcus.

Silver nitrate against all but tubercle, which is aggravated by this solution.

And for tuberculosis 5 per cent. iodoform in liquid vaselin injected into the bladder, 2 or 3 ounces, patient refraining from emptying the bladder when oil appears, thus retaining a continuous or frequently repeated bathing of the bladder mucosa. The injection to be repeated every few days.

Pyorrhea Alveolaris.—Absolute cure is seldom attained in pyorrhea alveolaris, but much can be done to keep it in check. The teeth should be absolutely freed from tartar, and finely-powdered copper sulphate may be packed into the pouches between the gum and the teeth with a

thin slip of wooden tooth-pick every two or three days till all discharge ceases. This may be alternated with similar applications of equal parts of the glycerine of carbolic acid and of tannin. Very loose teeth which failed to respond to treatment should be extracted, for the disease appears to spread from one to another.—*Indiana Medical Record*, April 2, 1902.

GASTRALGIA.—Sir James Sawyer, in *Practical Medicine*, says: Of all the directly therapeutic results in medicine with which I am acquainted, one of the most demonstrable is that which can be produced by the suitable exhibition of arsenious acid in uncomplicated gastralgia. I give $^1/_{24}$ grain of arsenious acid, made into a pill with two grains of extract of gentian, thrice daily, between meals. The use of this remedy must be continued for a few weeks. In a case of moderate severity no other medicinal treatment is necessary. The gastralgic pains become less frequent and less severe, and recovery is steadily and surely attained. In severe and more "obstinate" cases some form of counter-irritation to the epigastrium must be used, and used sometimes for several days or weeks. In the less severe of these cases I usually employ a rubefacient liniment of ammonia, or of ammonia and ethereal tincture of capsicum, well rubbed in by the hand, over the epigastrium, for five to ten minutes at a time, once or twice daily. Here is a formula for a good liniment of this kind:

℞ Ol. cajuputi ..... ʒj
Tinct. capsici æther ..... ʒiij
Lin. camphoræ ammon ..... ʒiv
Misc. ft. lin.

In still severer cases I use severer counter-irritation by the employment of an ointment from this formula:

℞ Pulv. ipecac..... ℥ss
Lin. crotonis..... ℥ss
Adipis..... ℥j
Misc. ft. ung.

Of this ointment a portion of the size of a filbert should be rubbed into the skin of the epigastric region, once daily, for as often as may be necessary.—*Indiana Medical Record*, October 8, 1902.

SELECTED PRESCRIPTIONS.

CYSTITIS —

℞ Tinct. elaterium ..... ʒ ij
Tinct. belladonna..... gtt xvi
Mucilag. acacia..... ℥ j
Distilled water.....q. s. ad ℥ iv
M. Sig. ʒ j q. 2 h. —DR. F. CLENDENAN.

GOUTY BRONCHITIS.—

℞ Potassii iodidi,
Ammon. carbonatis.....āā gr. iv
Vini colchici..... m. x
Tinct. scillæ,
Tinct. hyoscyami.....āā m. xx
Aq. camphoræ q. s.
M. Make a draught. Sig. To be taken thrice daily. —GREENHOW.

TRIFACIAL NEURALGIA.—

℞ Tinct. aconiti radicis,
Tinct. colchic. seminis,
Tinct. belladonæ.....āā
M. Sig. Six drops in water every six hours.
—MEDCLAFF.

PRURITUS.—

℞ Calcii chloridi ..... ʒ ij
Tinct. aurantii flor. ..... ʒ vi
Aq. chloroformi.....q. s. ℥ vi
M. Sig. One to two tablespoonfuls *t. i. d.*
—HARE.

ACUTE CORYZA.—

℞ Quinin bisulph.,
Dover's powder camphorated.āā ʒ ss
Powd. ext. belladonna,
Powd. aloin .....āā gr. iij
Powd. capsicum..... gr. vi
M. et ft. caps. xii. Sig. One q. 3 h.
—R. E. MASON.

EPILEPSY.—

℞ Potassii bromidi..... ʒ iij
Inf. adonis vernal.....f. ℥ ij
Aq. destill.....q. s. ℥ vi
M. Sig. Dessertspoonful *t. i. d.*
—BECHTEREU.

LARYNGO-TRACHEITIS.—

℞ Formalin..... m xv
Menthol..... ʒ ss
Tinct. iodidi..... ʒ ij
Alcohol ..... ʒ j
M. Sig. Inhale four or five times daily.
—INGALS.

CIRRHOSIS OF THE LIVER.—

℞ Pulv. rhei rad..... ʒ ij
Ext. aloes..... ʒ ss
Ext. colocynthidis..... gr. vi
Ext. Rhei q. s.
M. et ft. pil. No. lx.
Sig. One pill twice daily. —BAMBERGER.

The American Therapist.

A MONTHLY RECORD OF MODERN THERAPEUTICS,

WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

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Original Articles.

A CONSIDERATION OF THE COMMON CONTAGIOUS SKIN DISEASES OBSERVED IN CHILDREN OF THE PUBLIC SCHOOLS.

By JACOB SOBEL, M. D.
Attending Physician to the Department of Children's Diseases at the Beth Israel Hospital Dispensary, New York City.

Contact with a large number of school children during the past few years has impressed upon me the importance of a rapid cure in those dermatological affections which are classified as contagious, and which for that reason necessitate the exclusion of these young patients from a continuation of their studies. The vigorous campaign, instituted by the Department of Health of New York City through its corps of medical inspectors against all elements of contagion, has resulted in increasing the service at the dermatological clinics as it has in the various hospitals and dispensaries devoted to ophthalmology. In my dispensary and private work, both past and present, I have noticed repeatedly that the vast majority of pupils, because of their constant desire for information, take their exclusion to heart, and that any measures which restore them quickly to their classrooms are highly appreciated. It is, therefore, to a consideration of the more usual parasitic and contagious diseases of the skin, and more particularly to their treatment, that I invite attention.

By far the most common condition met with is *pediculosis capitis*. Its diagnosis requires neither great care nor skill, although I have known dandruff strewn along the shafts of the hair to be looked upon as ova or nits. Treatment varies with the stage of the disease and the condition of the scalp. Only in extreme cases is it necessary to cut the hair short; however, unbraiding of the hair should be insisted upon if a rapid cure is desired. If but a few nits are present, a careful washing with green soap and water, followed by a thorough application of vinegar and subsequent combing with a fine-toothed comb, will effect a cure. If the pediculi themselves are present, our aim must be directed toward their destruction. In poor-practice nothing answers a better purpose than crude petroleum; this must be used cautiously lest an annoying dermatitis result. In the better class of patients tincture of delphinium in vinegar (1:3) or bichloride of mercury in vinegar (1-500 or 1000) may be used. These combine the antiparasitic effect with a loosening of the nits. In pediculus dermatitis, that is those instances in which we find papules, pustules, excoriations and crusts with the formation of a moist exudation and agglutination of hair, a combination such as the following will be found very efficacious:

℞ Balsami Peruvian. ..... ℥ ss
Olei Ricini..... ℥ iij
Petrolei crudi .....q. s. ℥ vi
M. Sig. Apply twice daily.

A five-per-cent. white precipitate ointment will also be found useful.

Closely connected with the previous condition, and, indeed, in most cases dependent upon it, is *impetigo contagiosa*. Although usually attacking the face, chin, cheeks or forehead, it may occur on other exposed parts, or in fact on any part of the body. It begins as a small vesicopustule, with an inflammatory halo or zone; this increases in size, bursts and forms a thin, flabby, yellowish scab,

which looks, as Tillbury Fox says, "stuck on." One spot may give rise to several others by auto-inoculation, and in several instances the entire body may be involved. In most cases treatment is simple and effective; it is only the generalized eruptions which prove resistant. The removal of the contributing or underlying factor—pediculosis capitis—is the first indication. Medication of the lesion must be preceded by a softening of the crusts with a solution of boracic acid or with olive oil. For localized spots a protective dressing of ichthyol collodion (10 per cent.) is best. The individual lesions then heal kindly and dissemination is guarded against. Some may object to this treatment if the lesions are on the face or in close proximity to the scalp. If so, the official white precipitate ointment diluted to half strength with boracic acid or unguentum diachyli is very useful. It is needless to say that all toilet articles belonging to the patient should be carefully isolated from other members of the family.

Tinea or *ringworm* is a rather frequent disease. It is interesting and instructive to note the great variety of regions which this affection attacks. The two general divisions are ringworm of the scalp (*tinea tonsurans*) and ringworm of the body (*tinea circinata*). In ringworm of the body any part may be involved. I have seen it on the upper and lower lid, in the concha of the ear, in the preauricular region with extension into the concha, at the angle of the jaw, over the bridge and at the tip of the nose, in the supra and infra-orbital region, over the pomum Adami, back of the hand, buttocks, chest, etc. This localization of the lesion is somewhat important from a therapeutic standpoint, as will be observed when treatment is considered. The diagnosis of trichophytosis of the body is relatively easy. The configuration, the elevated margin, sometimes papular, sometimes vesicular (herpes tonsurans vesiculosus), the possible history of contagion or of association with domestic animals (dogs, cats, birds, etc.), and the presence of the trichophyton will generally suffice. Ringworm of the body responds more promptly to therapeutic measures than scalp ringworm. Even so, the laity do not as a rule expect rapid cures in this condition, so that any means which will afford rapid and ready disappearance of the disease will be welcome and appreciated. The method of treatment which I have adopted with gratifying results is the use of formalin. When properly diluted and carefully applied, one need fear no disagreeable effects. Two or three applications of the 40 per cent. solution, diluted two or three times, has repeatedly, in my hands, cured the affection of the body. In a skin which is particularly sensitive it is wise to avoid vigorous rubbing. If the smarting or burning is intense the application of ammonia water will afford relief. A one per cent. solution of picric acid or Burrow's solution is also valuable for the burning and smarting. If the ringworm is situated on the lids or in close proximity to the eye this method is inadvisable; the fumes of formalin are too apt to set up an acute conjunctivitis. I have never observed any serious dermatitis from the judicious use of this drug. A five per cent. ointment of the white precipitate of mercury or of chrysarobin will also prove efficacious, and tincture of iodine is a favorite remedy with many.

Tinea tonsurans or *ringworm of the scalp* is an affection more likely to escape detection than ringworm of the body, and one which, on account of its persistency and obstinacy to treatment, will test the patience and skill of the physician. Diagnosis is based upon the circular outline and scaliness of the patch, the broken or gnawed off hairs, the irregular feel to the touch, and the presence of the trichophyton. However, alopecia areata, and folliculitis decalvans must be differentiated. In alopecia the patch is bald and smooth, there are no *broken* hairs *in the patch*, there is no history of contagion, and the trichophyton is not found in the hairs taken from along the border. Fol-

liculitis decalvans is a secondary affection due to infection. The bald areas in this condition are the result of suppuration, and there is the previous history and absence of the mycelia and spores to aid in arriving at a diagnosis. It is difficult to imagine a condition in which therapy proves more thankless than in tinea tonsurans. Weeks, months, and often years pass by without any appreciable result. It is only natural, then, that many drugs have been recommended and tried. Being highly contagious, isolation from others is clearly indicated. Nor is it probable that success will crown our efforts unless the hair of the scalp be cut *very short;* cut, not in the barber shop, to disseminate the disease, but at home or at the dispensary. This is a *sine qua non* in local treatment. Each child is to have its own toilet articles—brush, towel, soap, etc.—and night cap, and to sleep in a separate bed. Epilation is to be practiced daily, a tedious and difficult procedure, but one of the few calculated to be effective. Formalin solution (40 per cent.) diluted two, three, or four times, and applied with care, omitting the treatment occasionally if irritation is produced, will prove useful. Chrysarobin ointment (5 per cent.) is valuable if its action can be limited, that is if it is applied only to the diseased areas. Its careless use on the scalp not only gives rise to a severe and diffuse dermatitis, but also to a disagreeable discoloration of the hair. The white precipitate ointment is devoid of these objections, and, while less potent, sometimes proves effective. Frequent washings are to be avoided. Pyrogallic acid, turpentine, carbolic acid, anthrarobin, nitrate of silver, trikresol and others have been tried with very varying results. The future will decide whether Finsen therapy and the X-ray cure this affection. Gottheil (*The Phila. Medical Journal*, Jan. 10, 1903) notes some success with actinotherapy in two cases recorded by Finsen, and in others treated by Gerson and Von Ziemssen.

Favus is relatively infrequent in New York City, and yet in the schools of the lower east side, attended for the greater part by Russian and Polish children, it is rather common. The typical case of favus of the scalp, with its dry, yellowish, confluent crusts, pierced by hairs, its cup-shaped depression, and the bald spots, due to atrophic scars, is a clear-cut picture. I have omitted the mouse-like odor as of diagnostic importance, because in my experience its presence is the exception rather than the rule. But the scalp is not the only region attacked. Within the past year I have observed lesions of favus in the interscapular region, on the forearm, and on the nails. It has been claimed that this disease is "imported," and its presence in immigrants bars them from entrance into the City of New York. Native-born children are often attacked, and the contagion, as a rule, can be traced to a child of foreign birth. Despite rigid laws I have personal knowledge of several cases permitted to land in this city with the disease in an active stage. But foreign-born children are not *directly* responsible for *all* cases of contagion. At a meeting of the Manhattan Dermatological Society of New York City, Dr. E. L. Cocks presented a girl of about twelve years with a typical favus of the forearm, and at the same time he showed a mouse that had been rambling about the house for some time with absolutely characteristic lesions of the disease both in appearance and location. The mouse had become blind owing to involvement of the lids, and was made a house pet by the child and handled daily. When the child presented herself for treatment the history elicited the foregoing facts.

Cases of favus must be excluded from school until every vestige of the disease has disappeared. These cases, however, are so numerous in the schools of the lower east side that it seems as if for these, as well as for tinea tonsurans, a separate building should be set aside for their instruction. Otherwise these pupils become children of the streets, and not

only lose interest in their school work, but fail to properly look after their disease. In this way they become a public menace, and of far greater expense eventually than if localized in separate schools. This idea is not of recent date, but it appears to me worthy of frequent reiteration. The first thing to do in a case of favus, after attention has been given to exclusion from school, careful instruction to the parents of the great danger of contagion, and the necessity of long and persistent treatment, is to have the hair cut close to the scalp with a machine. As in tinea tonsurans, do not tell the mother to have this done, for if you do she will surely proceed to the nearest barber shop, and render his machine a veritable hot bed of infection. I do not hesitate to say that in some instances observed on the lower east side the infection was carried in this way. Have the mother do it, or cut it short at the dispensary. I have done this repeatedly when assisting Dr. C. W. Allen, of New York, the machine being kept in pure lysol and washed thoroughly before using. Epilation is next in order; no force is necessary because the diseased hairs are easily loosened. If difficulty is experienced, the probability is that the particular hair is not diseased. This method must be carried out for a long time regularly, completely, and thoroughly. The parts may be softened with a one per cent. naphthol oil, as suggested by Joseph, washed with green soap, and then painted with a 5-10 per cent. solution of chrysarobin collodion or traumaticin, or an ointment of the same strength. In three or four days the parts are washed with green soap and water and epilation, followed by the above, again carried out.

Scabies is not uncommonly diagnosticated as eczema. From a therapeutic standpoint such an error is a valuable loss of time, because of the rapidity with which the disease responds to proper measures. Treat scabies as an eczema and the disease will make rapid strides or will become greatly aggravated. The existence of papules, papulo vesicles or pustules on the back of the hands, in the interdigital regions, and on the anterior surfaces of the wrists, the presence of the burrow or caniculus, the non-involvement of the face, the history that the condition becomes worse, that is, itches more when the patient retires and is covered with the bed-clothes, and the existence of the disease perhaps in other members of the family, means scabies. In prolonged cases the picture is somewhat different on account of the effects of scratching.

The treatment of scabies is simple. I have followed the plan of Sherwell with considerable success. He furnishes the patient with powdered sulphur and instructs him to rub it thoroughly into the affected regions — fingers, interdigital folds, wrists, elbows, pectoral regions, breast, abdomen, genitals, thighs, legs— and then dust a quantity into the bed sheets before retiring. I know of nothing which proves more effectual at the onset of the disease, more especially for the relief of the pruritus, than powdered sulphur. If eczematous patches are present an ointment recommended by Kaposi, and known as *unguentum naphtholi compositum* is very efficacious. It is composed as follows:

℞ Betanaphtholi.
Cretae albae ..... āā 10.0
Saponis viridis 50.0
Axungiae porci 100.0
M. Sig. Apply to the affected areas twice daily.

As Walker states, "the chalk aids mechanically in the opening up of the burrows, and the soft soap helps the penetration of the sulphur along them."

I have been in the habit of using the sulphur treatment at the very begining and following it by the afore-mentioned ointment.

Molluscum contagiosum is frequently overlooked or considered as a simple verruca. Owing to its contagious nature, it is important that it be recognized and removed at the earliest possible moment, for it is not only auto-inoculable, but hetero-

inoculable as well. Mollusca may appear on any part of the body, but the face, chin, neck and hands are the most frequent sites involved; rarely they occur on the mucous membrane of the lips (Allen). There may be one or many, appearing as small, medium, or large elevated round masses, of normal color or slightly red, with a small capillary passing over them occasionally, and *with a small central depression*, from which, on pressure or puncture, a small quantity of cheesy matter may be expressed. It is this *central depression* which differentiates the condition from an ordinary wart. Occasionally infection takes place in these lesions and give them the appearance of a large pustule or furuncle; other typical lesions, however, dispel all doubt as to its true nature. The treatment of these mollusca is removal with the small curette or scissors; bleeding is slight and readily controlled by pressure or the silver stick. The white precipitate ointment sometimes effects a cure, and infection, as stated above, often causes their disappearance.

Prophylaxis is the keynote of modern medicine, and in the prevention of disease, medical school inspection thoroughly and systematically carried out as it is in New York City, may be considered one of the great advances of the present century.

For Chronic Alcoholics.—Capsicum is likewise of avail. This remedy increases the appetite and digestive vigor, counteracts nausea, and relieves flatulence. It invigorates the movements of the heart and augments the secretion of urine. These are valuable properties and can often be utilized with advantage in the treatment of such individuals as I have been speaking of to-day. The efficacy of red pepper is, in fact, well known to topers themselves, who are much in the habit of adding it to their "pick-me-ups" after a debauch. Its combination of qualities renders it of service in delirium tremens.—John V. Shoemaker (*Medical Bulletin*, December, 1902.)

THE PHARMACY OF BENZOSOL.

By Frederick E. Niece, Ph.D.

The wide range of application to which benzosol is put deserves a closer study of its pharmacy. I have, with this idea in mind, made a number of experiments, which I herewith submit.

As a general thing, benzosol is administered in some solid form or other, which in many instances is very objectionable; therefore formulæ of a liquid nature, in which benzosol may be incorporated advantageously in a palatable state, is often an agreeable desideratum. In view of that fact, after careful laboratory and chemical experiments, a few have been selected at random and offered here as types. The therapeutic values of each are quickly seen when the component parts which enter into their composition are noticed. They have been so constructed as to particularly apply to the administration of benzosol in a pleasant state of combination, and as such have a vast field of application in the cold season of the year.

COMPOUND SYRUP BENZOSOL.

Benzosol, powdered.....	grs. xxxij
Tinct. tolu.....	ʒ j
Glycerin.....	ʒ vi
Syrup acacia.....q. s. ad	℥ ij

Mix the tincture with the glycerine, add the benzosol by agitation, then the syrup, and vigorously agitate to a homogeneous mixture. Each teaspoonful contains two grains of benzosol. This is recommended in such cases where pills, powders, capsules or tablets are intolerable.

COMPOUND EMULSION OF PETROLEUM WITH BENZOSOL.

Benzosol, powdered.....	grs. 256
Liq. petrol. (viscid; amber).	℥ iv
Powd. acacia.....	℥ iij
Glycerin.....	℥ ij
Oil cloves.....gtt.	iij
Water, hot.....q. s. ad	Oi

Add the petroleum and acacia together in a mortar, triturate thoroughly to a homogeneous mixture; add the oil of cloves, triturate; then add the glycerin and benzosol, previously mixed by tritura-

tion in a mortar. Mix all together thoroughly, then add the water in three equal proportions by constant trituration, continuing until a complete emulsion is formed. Rapidity in this instance insures good results. Each teaspoonful contains two grains benzosol and fifteen minims of petroleum.

The hypophosphites, one or all, may be added to the above, by first dissolving them in the water, prior to adding it to the mixture.

EGG EMULSION OF COD-LIVER OIL WITH BENZOSOL.

Benzosol, powd.....	grs. 128
Cod-liver oil.....	℥ viij
Powd. acacia.....	℥ jss
Glyconin U. S. P.....	℥ jss
Oil wintergreen.....	♏ xv
Oil bitter almonds.....	♏ viij
Glycerin.....	℥ ij
Hot water.....q. s. ad	Oi

Rub the acacia with one and a half ounces of hot water in a mortar to a smooth mucilage, when cool, add the glyconin by trituration; next add the mixed oils with the benzosol added; and add these by trituration to the above. Triturate this mixture constantly until a thick paste is formed; then add the glycerin and sufficient water to make a pint of the product.

Each teaspoonful contains benzosol, one grain, and cod-liver oil, thirty minims.

Other medicinal substances may be incorporated with the above, such as the phosphates and hypophosphites.

EXTRACT OF MALT WITH BENZOSOL.

Benzosol, powd.....	grs. 128
Glycerin.....	℥ j
Extr. malt (syrupy).q. s. ad	Oi

Mix the benzosol with the glycerin by trituration, then incorporate with the malt extract by agitation.

Each teaspoonful contains one grain of benzosol. In this case, iron, quinine and strychnia or other modification may be employed, along with the above, to advantage.

Painting the vesicles of herpes zoster with methylene blue in collodion (five per cent.) proves protective and soothing.

HEADACHES AND THEIR TREATMENT. *

By C. W. CANAN, B.S., M.D., Ph.G., Orkney Springs, Va.

Probably no symptom is so prevalent as headache; it is no exaggeration to say that it constitutes the largest share of the sum of human suffering. In certain diseases it not only is the chief symptom, but it constitutes almost the disease itself. It has all degrees of severity, from a dull, disagreeable sensation, to one of terrible agony. It may be paroxysmal, lasting only a few moments and recurring like the pain of colic; or it may be continuous, lasting a number of hours, days, weeks or months uninterruptedly. Again the pain may migrate during the attack from one point to another; starting in the forehead it may radiate to the supra-orbital regions, the temples, the vertex, or the base of the brain. Or, in that form known as hemicrania, the entire half of the head may be involved. As a rule, the more localized the pain the greater the suffering—known as clavus.

Headache may disturb vision and hearing; the eye may be flushed; the conjunctiva congested; and the whole eye may be inflamed, producing photophobia to a marked degree. The sight may be lost temporarily, or there may be other aberrations of vision during the attack or just preceding it. The patient is often as sensitive to sounds as he is to light. In some cases the slightest noise will greatly increase the suffering. The pulse may be slow or accelerated. In headache not induced by some contagious disease, with rise of temperature, the extremities and general surface of the body are cool or cold. The head may be cool or hot, according to the cause and severity of the case. Anorexia is generally present, but the opposite is sometimes the case to a marked degree. The urine is increased,

* Reprinted from the *Virginia Medical Semi-Monthly*, Dec. 26, 1903.

clear, and of low specific gravity in some patients, while in others the quantity is diminished, the color high, and the specific gravity increased. Mental activity and worry increase the patient's suffering.

Headache has been classed into many forms, and is known by many names. That form known as *sick headache* would be more clearly understood were it known as periodical headache. These attacks recur at intervals varying from days to several months, frequently with a good deal of regularity, which may be unbroken from childhood to middle life. Another form is that known as *bilious headache*, which is far more often due to indigestion than to biliousness. Nausea and vomiting are frequently present, and in this respect it resembles periodical, or, as the laity calls it, sick headache, but in other respects it differs widely.

Nervous headache is seen among those who are overworked mentally, or who have great business cares and troubles. This form causes much suffering during middle life, when men and women are facing the stern problems of life and are trying to get on in the world. It has no apparent relation with digestive derangement, but a very close one with nervous phenomena and disposition. In fact, it has its origin in these. Those who are emotionally inclined are the ones that first succumb to this disorder.

Carbonic acid headache, as the name implies, is produced by bad ventilation. The common experience of many persons after remaining for a while in church or in crowded rooms, with unchanged air, or sleeping in badly ventilated apartments, is to suffer severely from this kind of headache.

Another form is known as *malarial headache* or malarial cephalalgia. This is paroxysmal in character, is nearly always unilateral and supra-orbital, and has a periodicity as regular as ague chills. Then there is the headache of childhood due to a variety of causes, such as indigestion, torpid liver, constipation, etc.

Rheumatic headache is due to a rheumatic affection of the muscles and aponeurosis covering the cranium. The pain and tenderness are very severe, but this condition is rather rare. There is a form which has lately been named, and very wisely so, *reflected headache*. This is the result of certain diseased conditions remote from the head, especially diseases of the generative organs, and is therefore observed most frequently in women. It is that form that we frequently see in hysteria, coming on with great violence, without warning, and often disappearing as quickly as it came.

There is a headache in anemic and debilitated persons known as *anemic headache*. This is seen in girls who suffer from chlorosis, and in most cases in which the red blood cells are reduced in number and the percentage of hemoglobin decreased below the normal.

Then we have the *headache of heat-stroke*. This is sometimes very distressing, and may last for many years, especially if the patients expose themselves to the sun's rays.

Nephritic headache is present sometimes in acute desquamative nephritis, but is often noted in the slow progressive interstitial nephritis.

Besides the types already mentioned, headache is one of the principal symptoms in many of the acute contagious diseases, and is the chief source of suffering in quite a number of these cases.

My aim in writing this article is to give to the profession in as brief a manner as possible my experience in treating this very complex condition.

In the treatment of headache three objects should be kept in view. First: To relieve the immediate attack; second, to lengthen the interval between the attacks, and to reduce the predisposition to them; and third, to remove the cause and produce a real cure whenever it is possible. The treatment in each of these three divisions consist of both medication and hygienic regulations. To be able to relieve

a patient promptly who is suffering from a severe attack is a nice accomplishment, and one that will increase you in the patient's favor.

There is no lack of remedies recommended for this purpose; yet there are only a few that will yield the desired results without producing ill after-effects. The drug superior in my opinion to all others in affording quick relief is hemicranin, and, if properly administered, it will produce more lasting effects than any ever prescribed by me, and I believe that the field has been well gone over. This drug is not only the most efficacious in ameliorating the attack when present, but taken judiciously it will aid very materially in preventing recurrences, and often aborts an oncoming attack if administered in time.

In periodic headaches there is a very poor show of ever bringing about a complete cure, but by proper care and regulation they can be greatly ameliorated. To relieve the pain 5 grain doses of hemicranin should be administered every ten minutes until three or four doses are taken, or the pain ceases. Instructions should be given to begin the powders as soon as the first symptoms of an attack are discovered. The treatment between the paroxysms should be along hygienic lines and to promote the proper functional activity of the different organs. In bilious headache, which is most frequently due to indigestion, there is little chance of alleviating the attack until the stomach has been emptied. I have seen cases in which all remedies failed to relieve the nausea and headache until the stomach had been completely evacuated. This can be encouraged by drinking warm water or by the use of lavage with the tube. Then, if the nausea persists, a full dose of bismuth to which 5 grains of hemicranin have been added should be administered. In other cases small doses of aromatic spirits of ammonia should be given at short intervals until the nausea ceases; then, if the headache still continues, five grains of hemicranin, repeated in 15 or 20 minutes, will quiet the nervous system and completely allay the pain. If the case be one of purely bilious headache, which is evidenced by the patient vomiting bilious matter repeatedly after the stomach has been emptied, one grain of calomel should be rubbed up with five grains of bicarbonate of soda and sugar of milk, and divided into fifteen powders. One of these should be given every fifteen minutes until the nausea ceases. This should then be followed by a free saline purgative. If the patient still remains excited and cannot sleep, a dose of hemicranin, repeated if necessary, will have a happy effect.

The attacks of nervous headache can, as a rule, be promptly relieved with hemicranin administered in small doses and at close intervals. These attacks can often be aborted if the patient can be induced to give up his business cares for the day and remain in a quiet dark room and rest, or, if possible, sleep until the time for the seizure has passed by. To cure these headaches it is necessary to secure tranquility of the nervous system, to keep emotional perturbations at a minimum, except the pleasurable ones, and even these should never be exciting. The duties of a life should be as free as possible from worry of mind and bodily exhaustion, and the greatest possible measure of sleep should be obtained. It is also very important that all stimulating food and beverages should be abstained from. If the system is below the standard, a tonic line of treatment should be instituted — from malts, hypophosphites, strychnia, quinine, cod liver oil and arsenic will be found the best to choose from.

In carbonic acid headache, which is generally experienced on rising after sleeping in a badly ventilated apartment, or on spending an hour or two in a crowded hall, one or two doses of hemicranin and exposure to pure air will be all that is necessary. To prevent further attacks instructions should be given in regard to proper ventilation.

Malarial cephalalgia is seen in patients

who suffer from chronic malaria. As a preventive quinine or arsenic will give the best results. To allay the severe attacks hemicranin in full doses will generally give prompt relief. To effect a cure the patient should be sent to the mountains during the hot months, where he can drink freely of mineral waters and bathe regularly. For those who suffer from torpid liver, with constipation, alkaline laxatives are of service. For the relief of pain, which is generally supra-orbital, a useful domestic remedy is the bark scraped fine from peach tree twigs, made wet with vinegar and tied tightly over the forehead. In rheumatic headache hemicranin is an excellent palliative.

The headache of childhood requires special study and consideration, as children can but imperfectly describe their sensations, and cannot reason about them. First, the cause may be discovered and removed with small, if any, assistance from the patient. To relieve the attack itself we have no better agent than hemicranin. In most instances I follow the same plan with children that I do with adults—that is, divide the drug into small doses and repeat often until relief is obtained. To produce a cure it is essential to find the cause. If it be indigestion, this should be corrected by appropriate remedies and dietary. A great deal of headache from which children suffer is caused by mental overwork and too close confinement. So many parents think that their children, although weakly, must be kept in school and must keep up with their classes, and that outdoor air and exercise is harmful. The fact is these children should spend as much of their time out of doors as possible, and when indoors they should be in well lighted and ventilated rooms. Their race for an education is of secondary matter when compared with their vigor of body. When headache is due to defective vision, as is often the case, the child should be kept away from its studies until glasses have been adjusted or the trouble corrected.

Reflex headache is found in adolescents of both sexes who are undergoing the changes that take place before they reach maturity. This type of headache is often seen in women and girls, and is called by some writers menstrual headache. In some women it precedes the flow by a day or two and ceases when it is fully established, but in others it lasts the greater length of the period unless treated. These paroxysms are very severe and require large doses of anodynes to relieve them.

To ward off the attacks I have found that valerianate of ammonia, taken repeatedly, is one of the best remedies. It should be administered as soon as the first symptoms develop, and in those who are regular it should be begun twenty-four hours prior to each period. In chlorotic girls and those who are anemic, with cold extremities, five grain doses of hemicranin should be administered every fifteen minutes until relief is obtained or twenty grains have been taken. This, together with hot hip baths, is sufficient to control the attack. If the first round of doses fails to give relief, it can be repeated in a few hours. The after-treatment should consist of tonics and hygienic measures.

The headache of cerebral congestion or hyperemia is best treated with bromides, ergot, counter-irritants, and depletive measures. The bromides should be given in large doses, and should be continued for weeks without bad results. During the severity of the suffering the head should be elevated and kept cool by the application of cold water or ice, and the patient should be kept scrupulously away from noise and excitement of every kind; gentle bodily exercise is often beneficial after the intensity of the attack is over.

The treatment of headache of inflammatory diseases of the brain and spinal cord should follow the same line as that just described—bromides, chloral, hyoscyasmus, opium, and cold to the head, and heat to the extremities. Opium should never be prescribed unless the suffering

makes it positively demanded, and then it should be given hypodermically.

To relieve nephritic headache, the cause must be kept in mind. The accumulation of uric acid in the blood is the cause, and the most satisfactory results are to be obtained by lessening the formation of this product in the body in proportion to what the kidneys are capable of excreting. This is accomplished by reducing the mental and bodily exercise and continuous rest, in bed if need be. Paroxysms of unusual suffering can be relieved by administering full doses of hemicranin. This acts upon the skin and kidneys, thereby not only allaying the pain, but removing the cause to a certain degree. In all the headaches occurring in acute diseases there is no remedy more efficacious than hemicranin. In scarlet fever and diphtheria it quiets the heart action, reduces the temperature, and increases the action of the skin and kidneys, relieves the pain, and induces sleep. The same is true of it in la grippe, tonsilitis, colds, etc. It not only alleviates the headache in pneumonia, but produces an active state of the skin and improves the labored breathing when due to weak heart-action and lack of oxygenated blood. Given during the first week of typhoid fever it removes the headache, the pains in the limbs and back, reduces the temperature, and produces rest and sleep. One great advantage of hemicranin over other remedies of its class is that it is a heart stimulant, whereas the majority of those that exert a decided analgesic effect depress the heart-action or interfere with proper oxygenation of the blood, therefore rendering them unsuitable in many diseased conditions. A drug that will relieve the many forms of headache and at the same time strengthen the heart-action, increase the vascular tone, promote the elimination of excrementitious products from the system by stimulating the channels through which they are thrown off, and reduce an abnormal high temperature, is certainly worthy of our most careful study. This is why it is superior in all those headaches that occur as a prominent symptom in all the acute maladies. It can be administered in capsule, in powder upon the tongue, in wafers, or in solution. Small doses should be given at short intervals until relief is obtained or 20 to 30 grains have been taken.

Bathing the pubic region with ether or chloroform is said to kill instantly all pediculi.

For the acute rheumatic attacks of childhood Crandall advises salophen as a substitute for the salicylates.

PREGNANCY.—Professor H. Jewett, in his "Manual of Childbed Nursing," gives the following advice as to diet and the care of the nipples:

Diet.— Milk, eggs, farinaceous foods, fruit, especially cooked fruits, with little or no sugar, meat once daily, should be the basis of the dietary.

Fried dishes, pastry, rich foods, excess of meats, of sweets and of tea and coffee, and overeating, should be avoided.

Alcoholic stimulants are forbidden, except as ordered by the medical attendant.

Six or eight goblets of pure water should be drunk daily, best within one or two hours before meals and at bedtime. It may be hot or half-cold. Ice-cold drinks are injurious.

The patient should seek the advice of her physician with reference to further details.

Care of the Nipples. — During the last one or two months the nipples should be cleansed daily with a borax solution — tablespoonful to a pint of water. They may be anointed with fresh cacao butter after cleansing, and if small or sunken should be gently drawn with the thumb and fingers. Kneading them daily with clean fingers helps to prepare them for nursing. The hands should first be cleansed with soap and warm water.— *Southern California Practitioner.*

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Editorial.

SELF-MEDICATION, SUBSTITUTION, AND THE LAITY.

During the past few years some of our local newspapers have seemed to think that it would be to the best interests of the community to publish short editorial comments upon the various diseases of mankind, and incidentally to offer suggestions as to the best course of treatment. We have been informed in the past of the fact that a prominent statesman had died of "arterial cirrhosis," that Addison's disease was synonymous with the "black plague," and that such and such were the symptoms and indications in diabetes, cardiac diseases, tuberculosis, ptomaine poisoning, and so on. While in itself education of the masses is a very liberal thought and worthy of commendation, still this attempt at medical information, embryonic at best, is a dangerous procedure, and is calculated to work immeasurable harm. It might be well to remind the writers of such articles that "a little learning is a dangerous thing"—for their readers. As it is, the numerous instances of drug poisoning so very common in these days are due to a supposed familiarity on the part of the laity with the United States Pharmacopœia. This self-medication can be traced largely to the "Doctor's Advice" columns in some of our newspapers; the daily accidents from the reckless and unwarranted sale and use of phenacetin, antipyrine, carbolic acid, and strychnine point to a crying need for proper restriction against this indiscriminate self-administration and the careless sale of powerful medicines.

An evil no less serious, and one which in the effects may prove even more disastrous, is that of substitution and drug adulteration. We say disastrous, for what can be more so to the health of the patient than the substitution of a powerful cardiac depressant for a properly fortified antipyretic, the existing condition being a distinct contra-indication to depressants? Is the pharmacist to judge of the proper therapeutic indication, and to take upon himself the duty of giving something "just as good?" How prevalent this custom has become is shown by the recent investigations of the Health Department in their examination of phenacetin powders. To remedy this evil half-hearted measures will prove inadequate. If we desire to guard the safety of our patients, to observe the physiological action of drugs, and to know what to expect from certain drugs or combinations, we must seek legislation which will deal rigidly with these offenders and place them, as they should be, in the category of criminals. Or, better still, since common law and existing statutes ought to afford full protection, let the physician direct his prescriptions to responsible pharmacists, where integrity is above suspicion. The offenders are a small minority, no more proportionately to the whole number than the percentage of rascals in any other profession or business-calling. The substitutor is readily recognized; avoid him!

AS FAR BACK AS 1889, CALVELLI recommended a solution of picric acid (6-1000) for the treatment of eczema, erysipelas, and lymphangitis. Very little was heard of the drug, however, until THIÈRY showed its great value in burns and erythemata. Since then solutions of picric acid have

found a varied field of usefulness in conditions associated with superficial loss of tissue, and in a number of pruritic skin affections. It is considered by many the remedy *par excellence* in burns of the first degree, relieving pain almost instantly and contributing markedly to the healing process. The writer has found it very useful in dermatitis enenata and in burning and smarting following the local application of formalin, nitrate of silver, and other caustics. MILWARD has recently recommended it in perionychia, soft corns, intertrigo, and ingrowing toe-nail. In this number ARTHUR W. YALE records its use in the treatment of pelvic inflammations. It may be used in the form of a one per cent. solution, or in combination with citric acid, known as Esbach's reagent (picric acid 1.0, citric acid 2.0, water 100.0). We have also had it in the form of vaginal suppositories (2 grs. picric acid to 100 grs. combined gelatine and boroglyceride solution), which offers a desirable form for use. The greatest objection to using picric acid is the staining of everything with which it comes in contact. Stains may be removed from clothing by boiling, and from the hands by immediately washing them in alcohol or in a saturated solution of lithium carbonate. When applying the drug with a bandage it is advisable to smear the hands with vaseline or lard in order to lessen, or obviate, its tendency to stain. Although a few authentic cases of poisoning, following the local application, have been recorded, the danger of toxic symptoms is very slight.

NEURALGIA, "THE PRAYER OF THE NERVES FOR BLOOD," as it has been termed, cannot always be traced to its etiological factor, malaria, anemia, gout, rheumatism, debility, syphilis, pressure, etc., and hence it is not always possible to follow the first indication in treatment, namely, removal of the cause. We abstract in this issue an interesting communication on the treatment of neuralgia with castor oil. The results obtained in the cases mentioned were well nigh incredible, and for that reason make this application of the drug all the more valuable. This treatment is a therapeutic hint, worth remembering when brought face to face with instances which have resisted all other means.

IT IS a fundamental principle in the prescribing of drugs that, other things being equal, a combination which is most agreeable to the sight, taste and smell should always be selected. In the treatment of intestinal affections, typhoid fever among the number, the benzoate of guaiacol or benzosol is frequently used, and most commonly in the form of pills, powders, or capsules. In this number DR. FREDERICK E. NIECE contributes a short, but very practical article on the pharmacy of benzosol, and places at our disposal a series of useful and efficient combinations of the drug, which should prove of value where the usual administration is difficult, impossible, or contra-indicated.

THOUGH but a manifestation of some underlying condition, headache frequently enough incapacitates the individual for varying periods and makes his life one of suffering and dissatisfaction. A symptom so commonly met with in daily practice must interest all and cause us to seek for remedies which afford speedy and permanent relief. In this issue Dr. C. W. Canan relates his experience with this annoying affection and formulates the treatment most applicable to the various forms. His object of treatment will satisfy every indication, since it seeks "to relieve the immediate attack, to lengthen the interval between the attacks, to reduce the predisposition to them, and to remove the cause and produce a real cure whenever it is possible."

Tobeitz advocates the use of turpentine for scarlatina. He begins with hypodermatic injections of fifteen minims, and follows this in two days with twenty drops in capsules or emulsions.

THERAPEUTIC NOTES.

For generalized pruritus in children M. du Castel recommends ten to sixteen drops of a one per cent. solution of lactic acid, during twenty-four hours.

In muscular and neuralgic pain five to ten drops of guaiacol rubbed gently along the seat of pain affords relief.

R. Breuer recommends diuretin in doses of 0.5 gm. four or five times daily for angina pectoris.

In habitual death of the fœtus in the later months of pregnancy, Jardine advises chlorate of potash in ten grain doses three times daily.

A ten to twenty per cent. solution of nitrate of silver locally applied will relieve pruritus ani.

An old remedy for bronchial asthma, worthy of trial in obstinate cases, is the fluid extract of quebracho in fifteen to twenty minim doses.

Dr. A. C. Faulds, of Glasgow, claims to have cured one-third of his diabetic patients by the use of dried eucalyptus leaves.

For ozœna Bonnet recommends irrigation of the nares with a 0.25 per cent. solution of methylene blue.

In chorea the hypodermatic injection of hyoscine hydrobromate (gr. $^1/_{200}$ to gr. $^1/_{100}$) was found by Ewing to give good results.

Use a half to one per cent. solution of eserine in glaucoma to reduce the eyeball tension, and avoid atropine.

Hypodermatic injections of large doses of atropine (gr. $^1/_{40}$ to gr. $^1/_{20}$) have been found by Felt to cure sciatica when other methods had failed.

Equal parts of acetanilid and sodium salicylate, blown on the tonsils, have given relief in tonsilitis.

Current Literature.

Castor Oil in Neuralgia.—*The Medical Council*, January, 1903, quotes as follows:

The fact that large doses of castor oil will relieve neuralgia of the severest long-standing types has been demonstrated for some years at least, though not generally known, according to Dr. F. E. Waxham, of Denver, Colorado, in the *Colorado Medical Journal*, 1902, page 521, who cites some conclusive cases. His attention was called to the matter by a paper of Dr. Harold Moyer, of Chicago, in the *Journal of the American Medical Association*, of April 21, 1900, who in turn credited Ochsner, of Chicago, with bringing the matter to his mind, and who had first seen mention of it in some German medical journal that he could not recall, and which a careful search in the Newberry Library, of Chicago, failed to reveal. It is specially efficacious in neuralgia of the fifth nerve, though also remarkably so in other regions. Thus, one of Dr. Moyer's cases, a supra-orbital neuralgia of fifteen years' duration, was cured by half a dozen doses of oil. Another, with typic tic douloureux of seventeen years' standing, in a man thirty-four years of age, with general health impaired from the severity of the pain, and who had come prepared for any operation the surgeon might think necessary, was so much relieved by a single dose of oil that he considered himself cured. Another, with a similar trouble of five or six years' duration, and who had had his infra-orbital nerve stretched three years before, and also came for operation, was permanently relieved of all pain after one week's treatment with castor oil.

Dr. Waxham has also had some interesting cases. A boy with intense supra-orbital neuralgia had his pain eradicated after taking a few doses of oil. A tubercular case, with the most severe kind of intermittent neuralgia, appearing every day at 7 A. M. and lasting two hours, with the patient nearly crazed from the intensity of his suffering, patiently bore his punish-

ment for a number of days, and only sent for help when two paroxysms of unusual severity occurred on the same day. A dose of the oil was given, and continued for several days. The pain never returned after the first dose.

The action of the oil in the relief of neuralgia is not understood. It is not due to its laxative effect, because other remedies producing similar results are without effect on the pain, though continued for a number of days. It finally loses its laxative qualities, though fully effective as an anodyne. It is fair to assume that the oil contains some analgesic principle, which it is much to be hoped that chemistry will soon discover.

The dose is one or two ounces once a day, preferably before breakfast. If the oil is at all stale or rancid, it can be washed by shaking vigorously for a short time with cold water.

Picric Acid in the Treatment of Pelvic Inflammations. — Dr. Arthur W. Yale, in *Hahnemannian Monthly*, July, 1902, says:

Our text-books and chemistries contain but meagre information concerning picric acid, and this is equally true of medical literature in general. It is prepared by the action of nitric acid on phenols containing the benzene nucleus, and chemically known as trinitrophenol, with a formula of $C_6H_2(NO_2)_3OH$. In the laboratory it is used as a test for albumen and the alkaloids.

Until within a few years, however, its value as a therapeutic agent remained unknown. Recently it has been recognized as a potent local application in the treatment of burns, and is now used in most of our large hospitals, in the form of an aqueous solution, applied directly to the burned surface; and it has been unquestionably demonstrated that burns thus treated heal more quickly and leave a smaller and smoother cicatrix than results from any other local dressing.

Dermatologists are beginning to recognize the value of this drug in the treatment of skin lesions, and especially in those affections which are accompanied by a pruritus. It was the foregoing fact which led the writer to test the value of picric acid, in his clinic, in the treatment of inflammations along the female genital tract.

Erosions of the cervix being somewhat analogous to skin lesions, it was with these obstinate cases that the initial trials were made. Many of these patients had been unsuccessfully treated with the numerous local applications familiar to the gynæcologist, but under the action of picric acid the healing was prompt and in most cases permanent. The best method of application was found to be the dusting of picric acid crystals upon a pledget of cotton, and placing in contact with the undried cervix. These results led to the use of tampons dipped in a saturated solution of picric acid and glycerine instead of the usual boroglyceride and ichthyol solutions. Here it has afforded more permanent relief than the latter drug, although its analgesic action is somewhat slower. It has been found especially useful in acute congestion not only of the vagina and cervix, but in the uterus and its appendages. In many cases where surgical interference was imperative, but refused by the patient, picric acid has held in check the process, although in many cases this was deep-seated.

Among the most stubborn cases which the gynæcologist is called upon to treat are leucorrheas. The time-honored method of combating these complaints has been by means of the douche—bichloride, permanganate and creolin being the favorites. Picric acid in varying strengths was substituted for these; and, in this connection, a fact more interesting to the physician than to the patient should be mentioned. Some patients were found to be extremely sensitive to the action of the drug, and its use in too large quantities produced erosions upon a hitherto unaffected cervix; and in other cases vaginitis developed, with myriads of minute ve-

sicles, accompanied by a profuse and excoriating discharge and intense pruritus. Notwithstanding these unlooked-for consequences, the majority of the cases exhibited marked improvement, the discharge decreasing, and in most instances its excoriating character and the pruritus ceasing after one or two douches. I determined, therefore, to find a better menstruum than a douche for administering the acid, and induced one of our large manufacturing pharmaceutical chemists to make up some suppositories containing picric acid in different proportions, the advantage of the suppository over other methods of application being in the prolonged time during which the medicament is kept in contact with the affected part. The suppository containing three grains of picric acid has proved most efficacious.

The patient is given several of these suppositories, with the instruction to place one as high up in the vagina as possible, after going to bed. In the morning she should be directed to take a hot douche, preferably while in a reclining posture.

Treatment of Gout. — J. W. Springthorpe (*Australian Medical Gazette*, July 21, 1902) concludes as follows:

1. A restriction in the amount of proteid in the food is at once suggested. But in practice we must bear in mind the fact that vegetable proteid is less easily assimilable than animal, and that the interrelations of the other hepatic functions have to be considered. Hence, discretion is always necessary. During an actual attack meat may, no doubt, be entirely cut off; but in the intervals, as shown by many cases of chronic gout, cholelithiasis, and phosphaturia, there may be times and patients who thrive best on a plain meat diet, just as there are others, mostly rheumatic, by the way, who have come to regard a vegetarian diet as their salvation.

2. The value of plenty of water to flush the system, of free exercise to oxidize the proteids, of free bowels (especially in the rheumatic, with the aid of cholagogues from time to time), of free skin action, even to occasional Turkish and hot salt baths, is also apparent.

3. The importance of protection against chill by clothing and climate is equally obviou. Jäger or the like next the skin, or cellular cloth, where wool is irritant, the use of cumerbunds or cholera belts, and avoidance of variable damp climates, are thus indicated.

4. So, too, the frequent use of alkalies, or, as in phosphaturia, the occasional use of acids is justified theoretically as well as practically.

5. The advisability of taking as little alcohol as possible requires no further comment.— *Carolina Medical Journal*, October, 1902.

Chronic Ulcers. — H. W. Cummings (*The Texas Med. News*, Nov., 1902) says:

I will now outline to you in a few words the course of treatment which in my hands has given the best results of any I have tried. I first wash thoroughly the leg with either soap and water or salt solution. Then I wash the ulcer in a 1 to 1000 solution of bichloride. This secures thorough asepsis. If the edges of ulcer are indurated I curette them, otherwise I apply pure carbolic acid to the surface and edges of wound, after which I apply alcohol to remove same. Next the ulcer is well dried by absorbent cotton. Then I take a piece of moist bichloride gauze (this I prepare in office by immersing plain aseptic gauze in a solution of 1 to 1000 bichloride, preserving in a solution ready to be squeezed out when used), placing over ulcer, using a piece thick enough to compress the edges of the wound, apply a light gauze roller bandage to hold in place; a well fitting stocking should then be worn during the day. The rubber bandage can be used, but I prefer the stocking, because the pressure is more evenly distributed, and is more easily replaced by the patient after removal at night, which should always be done. The

light gauze bandage will retain dressing at night. I repeat this dressing two to three times a week. The use of the elastic stocking should be continued some time after recovery of ulcers in order to support the limb, improve the circulation and possibly relieve the varicosed veins, which are liable to cause a return of the disease.

To re-iterate, I believe the pure carbolic acid the best agent to destroy unhealthy granulations; it renders the ulcer thoroughly aseptic and gives but little pain. I have found the wet bichloride gauze acts better in promoting healthy tissue growth than any remedy I have ever used, and the elastic stocking gives most even pressure to the limb, remains permanently in the position applied and is easier replaced by patient after removal.

SANTONINE.—This drug, which has generally been looked upon only as a reliable anthelmintic and very seldom thought of except in certain forms of verminous trouble, is now found to possess a much wider range of action and to be of special value in the treatment of epilepsy and the pains of locomotor ataxia. The physiological action of this drug is markedly upon the nervous system; taken in large doses, producing great weakness, tremor, perspiration, coldness of the extremities, vomiting, and not infrequently quick, sharp convulsions, terminating in death from paralysis of respiration.

The effect upon the vision is very marked; at first, everything appears blue, which speedily turns to a greenish yellow, which may be followed, if large doses have been taken, by total blindness lasting a week or more. The physiological action of this drug is so marked in its effect upon the nervous system that we obtain a remedial agent of great power in influencing general changes of nervous sensibility. In its action we have an excellent reproduction of the symptoms of epilepsy and the pains of locomotor ataxia, and Lydston claims that he has obtained better results from it in epilepsy than from the bromide treatment. The dose recommended in these cases is two grains three or four times a day, gradually increasing to fifteen grains at a dose, if that amount is well borne. In the fulgurant pains of locomotor ataxia we have given two grains three times a day, with better results than from any other drug, the pain almost entirely disappearing while under its influence. Studying the action of drugs, from the dual standpoint, there can be no doubt of the wide range of action of santonine on the nervous system and its great value in many other diseases. — *The Medical Times*, December, 1901.

CARDIAC PALPITATION.—

℞ Quinine hydrobromate..... ʒ j
Powdered digitalis,
Extract of convallaria.....āā ʒ ss

M. et ft. pil. No. xl. Sig. Two to four daily.
—HUCHARD.

FORMALDEHYDE FROM WOOD ALCOHOL.—In a brochure "The Formaldehyde" (Second Edition, N. G. Elwertache Verlagsbuchhandlung, Marburg, 1901), Dr. Otto Hess, Chief-Physician to the Medical Clinic of Marburg University, refers to the many formaldehyde generators which depend upon the incomplete combustion of wood alcohol for the production of formaldehyde gas and which have proved entirely insufficient, stating on page 49:

"The main reason for the failure of these lamps is that they produce far too little formaldehyde. According to Strüver and Brochet, only 5 to 10 per cent. of the wood alcohol used is changed by the combustion to formaldehyde, *90 to 95 per cent. being lost as carbonic acid and water.*

"Another disadvantage of these lamps is the production of carbonic oxide gas, which is created by every incomplete combustion. The quantity of same is, according to Brochet, 3 to 5 per cent. of the alcohol employed. Such a large quantity of gas in the air can cause disagreeable effects."

Treatment of Hydrophobia. — F. S. Pearce (*Medical Fortnightly*, May 26, 1902) says: Treatment is preventive, the antitoxic method discovered by Pasteur being the only one known certain of saving the patient. It should be resorted to immediately upon learning the true nature of the disease in the animal that has been the source of infection; and in view of the severity of the malady, should be done without delay where there is any suspicion or doubt. The anti-rabies serum should be injected according to the dosage prescribed by the laboratories where it is prepared; that of Gibier in this country being the most desirable product. Treatment after the development of the disease is entirely symptomatic; the use of cannabis indica; of the calabar bean; the bromides; and chloral being indicated; guarding the patient from noises or extremes of light or cold is an essential point in amelioration of the terrible symptoms of this, until recently, incurable disease.

Comparative Value of Quinine and Methylene Blue in Malaria. — Drs. John J. Moore and W. L. Allison (*Medical News*, December 6, 1902) conclude that:

1. Methylene blue will destroy malarial parasites in many cases, but is less certain than quinine.

2. Methylene blue is probably most valuable in chronic cases, but has no advantage over quinine.

3. The effects of methylene blue are ordinarily more unpleasant than of quinine.

4. It is useful in cases that cannot take quinine on account of some idiosyncrasy to it. Its use in cases of pregnancy is undetermined.

5. It is probably valuable in treating hematuric and hemoglobinuric fevers on account of its diuretic action; this has yet to be determined. We have had no chance to test its use in such cases.

6. We believe that quinine is quicker and much more certain, and would rely upon it rather than upon methylene blue.

Diet in Constipation. — A. L. Benedict (*The Medical Standard*, November, 1902), in an article on "Practical Dietetics," says:

The time-honored idea in treating constipation dietetically is to administer food rich in cellulose and other solid residue. Such food is laxative, partly by direct mechanic irritation, partly by chemic results of fermentation, partly by the pressure of such gases as methane and carbon dioxid, partly by the irritation of the sugar contained. Figs, prunes, dates, apples, bran flours, molasses, etc., are the common ingredients of such a diet. While allowable in mild cases, without tendency to colonic irritation, including a vulnerable appendix, the exact cause of the constipation should be sought. More often than strict motor sluggishness, lack of fluid is a cause of imperfect action of the bowels. Among women and men of sedentary habits, who do not feel the need of water as a cooling beverage, it is frequently the case that this drink is almost never indulged in. To attempt to force peristalsis by irritants in such a case is as irrational as to crowd on steam in an engine impeded by lack of lubricant. Water should be taken as such, in the amount of from one to two quarts daily, or from four to eight glassfuls. Allowing a half glassful to each meal, the remainder should be distributed between meals and in the evening. When water is not taken as a beverage, tea and coffee, which are constipating on account of tannin, are usually employed as substitutes. In such cases there is the double indication to discontinue the tannin and to increase the amount of water.

With regard to mineral waters, it should be remembered that they act on account of the water and the dissolved chemicals, not from any mysterious power due to their being natural. At certain popular spas it is difficult to understand how the waters can be free from organic contamination. As a general rule, water should not be chemically pure, on account of the

exosmosis produced, which is said to lead to serious results, and even to death of certain lower animals. Mineral waters, like proprietary compounds, should be prescribed only when the dosage of the various ingredients happens to fit the special indication. The greater the number of ingredients in appreciable quantity, the more difficult the application of the water. Calcareous waters are to be avoided if there is a tendency to certain calculi, and in the aged; and other ingredients are to be avoided according to various conditions present. By far the simplest way is to use ordinary potable water of no notable mineral content, and to add whatever saline is needed.

Radiotherapy.—H. R. Varney (*Detroit Medical Journal*, December, 1902) summarizes the effects of the rays as follows:

First: Relieves pain.
Second: Diminishes new growths.
Third: Hampers all germ life.
Fourth: Assists in disappearance of odor and discharge.
Fifth: Exites a normal process of repair in all cell-structures.
Sixth: Little or no scarring.
Seventh: A most valuable therapeutic agent when properly used after operations in malignant conditions.
Eighth: Changes in character of growth pathologically to less malignant.

Dangers and uncertainties:

First: Possibilities of burns and gangrene. Pigmentation and falling of hair.
Second: Indefinite dosage.
Third: No universal technique.
Fourth: Difficulty in ascertaining the danger point in overstimulation.
Fifth: Diseases pathologically similar do not react the same.
Sixth: Possibility of mild or fatal toxemia.
Seventh: Possibility of stimulating pathological conditions to a more rapid growth, if not enough of ray is given.

Sciatica. — *The Monthly Cyclopaedia* (November 1902) abstracts as follows:

The treatment of sciatica is a difficult matter, because the origin of the disease is so difficult to reach. The writer has been treating this condition for some time with large subcutaneous injections of atropine. Although these large doses determine the usual symptoms of intoxication more or less distinctly, they appear to have a decidedly beneficial result upon the pain. This observer takes 0.06 gramme of atropine in 100 drops of water, and of this injects 3 drops at night, about 10 centimeters below the buttock of the affected limb. In about 20 minutes all the physiological effects of the alkaloid in question appear, namely: acceleration of the pulse to 120, dilatation of the pupil, more or less vertigo, and intense thirst. If these signs disappear in less than 10 hours, he supposes the reason to be that the dose was insufficient. The dose is therefore increased by 1 drop until these symptoms of intoxication continue for 24 hours. A second injection must not be given, however, until all the symptoms of the first dose disappear; consequently only one injection a day is required. Twenty-eight patients treated in this manner, including the writer, with a record of 22 definite cures. S. C. Felt (*Semaine Médicale*, No. 36, 1902).

Guaiacol in Typhoid Fever.—A. T. Stewart (*The Medical and Surgical Monitor*, December 15, 1902) states:

In five cases of typhoid fever, with an evening temperature ranging from 103° F. to 104° F., the use of guaiacol has given me good results. In connection with this agent the entire body was sponged with tepid water at frequent intervals, but more especially after the internal use of the guaiacol, which was given four drops in whiskey each four hours. At one and four o'clock P. M. each day, commencing with the second week, twenty drops of guaiacol was topically applied to the abdomen, then a woolen covering used with a view of encouraging absorption. When the fall of temperature is not entirely satisfactory, I resort to the use of the cold sponging for a period of ten minutes each three hours. In some instances I used pepsin

and hydrochloric acid, diluted, each four hours, alternating with the guaiacol given as heretofore indicated. In case the bowels were not moving with sufficient freedom, a light laxative was given and at times an enemata. The diet was liquid in form and principally milk. If the patient was restless, or if insomnia demanded the use of any agent, codeine was occasionally administered. In these cases there was an absence of complications and the duration of the disease shorter than is usually observed. While it is sometimes asserted that good nursing and little medicine are important points in the care of this disease, yet, with even the limited number of cases treated as I have outlined, I am constrained to believe that this method is worthy of consideration.

PRACTICAL THERAPEUTIC HINTS.—C. E. Boynton (*Detroit Medical Journal*, November, 1902) says:

1. Indigestion and consumption is a bad combination.

2. Tapeworms are said not to thrive on a pure cocoanut diet.

3. Blood poisoning, red line up arm; ichthyol pure, locally, gutta percha and bandages; calcium sulphide internally; suspension of the arm, and catharsis.

4. Try goosegrease, 12 per cent. solution of iodine, for ringworm.

5. Use cranberry juice for fever-thirst and vomiting.

6. Tonsilitis points to rheumatism and not to endocarditis.

7. Gonorrhea has *its* rheumatism and endocarditis.

8. The far-sighted treatment for gonorrhea and for tonsilitis is calcium sulphide.

9. There is an "explosive nervousness" and delirium, a nervous irritability, etc., with the imprudent use of strychnine as a tonic.

10. When symptoms are, irritable stomach and slight constipation, give sodium phosphate ʒss every 2 or 3 hours.

Book Notices.

A COMPEND OF THE DISEASES OF CHILDREN.—Especially Adapted for the Use of Medical Students. By MARCUS P. HATFIELD, A.M., M.D. Third Edition, Thoroughly Revised, with a Colored Plate. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1903.

Though designed mainly for the use of medical students, this little volume contains much of a practical and up-to-date nature for the general practitioner. The chapters on hygiene and dietetics of the infant, diseases of malnutrition, epidemic and endemic infectious diseases, and the appendix on home modification of milk are particularly practical and to the point. We cannot agree, however, with the author in the statements that fetal rickets is chondrodystrophy or that quinsy is an abscess of the tonsil. A compend, based as this is, upon the works of Henoch, Kormann, Bouchut, Baginsky and Steiner, cannot fail to have merit in every page. The publishers have as usual furnished a work which is carefully prepared in its binding, print and portability. This compend is deservedly popular, and we recommend it to the student and practitioner.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION.—By Prof. CARL VON NOORDEN, Senior Physician to the City Hospital in Frankfurt a. M. Authorized American Edition. Translated under the Direction of Boardman Reed, M. D. Part 1: Obesity; The Indication for Reduction Cures. New York: E. B. Treat & Co., 1903.

This volume is one of a series which will appear at regular intervals and deal with those disorders of metabolism and nutrition which are of "importance and interest to every physician." It is safe to say that no one could be found who is better fitted for the task than Prof. Von Noorden. For many years he has occupied himself from a clinical and pathological standpoint with these conditions, and his monographs cannot but prove

interesting, instructive, practical and scientific. The present number occupies itself with obesity and considers the subject under the headings of the indications for reduction cures, simple obesity in otherwise healthy subjects, and complications with other diseases. Great stress is given to the fact that, before instituting treatment of any kind it is necessary to decide whether a so-called reduction cure or whether prevention of a further deposit of fat and the removal of dangerous complications is indicated. The chapters are presented in a forcible and convincing manner and afford a compact volume for ready reference. We look forward to the appearance of successive issues.

THE MATTISON METHOD IN MORPHINISM.—A Modern and Humane Treatment of the Morphine Disease. By J. B. MATTISON, M.D., Medical Director, Brooklyn Home for Narcotic Inebriates. Published for the Author. E. B. Treat & Co., New York, 1902. Price, One Dollar.

This monograph of forty pages is the result of thirty years' practical experience with patients addicted to the morphine habit. This modern and humane treatment consists practically of the gradual withdrawal of the drug, after a preliminary soothing of the nervous system by increasing doses of bromide of sodium. Careful and explicit directions are given for meeting different symptoms as they arise. His method which is a mean between two extremes—avoiding the painful ordeal of abrupt disuse and the tiresome delay of prolonged decrease—is the result of extended trial and observation, and for that reason of great value. The volume is recommended to those interested in the subject.

PAMPHLETS RECEIVED.

Second Annual Report of the New York State Hospital for the Care of Crippled and Deformed Children. For the Year ending Sept. 30, 1902.

Symptoms, Diagnosis and Complications of Gonorrhœa. By ABRAHAM L. WOLBARST. Medical News, November 8, 1902.

The Use of the Electric Cautery Clamp in the Treatment of Cancer of the Uterus. By CHARLES P. NOBLE. American Gynæcology, Dec., 1902.

SELECTED PRESCRIPTIONS.

ACUTE LARYNGITIS.—

℞ Menthol.....gr. xiv
Ol. pini sylvestris,
Ol. eucalypti,
Tinct. benzoin.,
Tinct. tolutanae .....āā ʒ ss
M. Sig. Inhale from kettle.

—*Le Progrès Medical.*

NERVOUS DYSPEPSIA.—

℞ Sodii bromidi..... ʒ ii
Chloralis ..... ʒ ss
Aquae chloroformi,
Aquae destillatae .....āā q. s. ℥ iv
M. Sig. ʒ ij after each meal.—H. A. HARE.

GONORRHEA.—

℞ Carbolic acid.....gr. x
Pure iodine .....gr. v
Olive oil..... ʒ ss
Lanolin ..... ℥ i
M., ft. ungt.
Sig. Applied to posterior urethra by means of small silver tube. —GERALD DALTON.

CARCINOMA UTERI.—

℞ Iodine ..... ʒ i
Bromine ..... ʒ ii
Carbolic acid..... ℥ ss
Alcohol ..... ℥ viij
M. Sig. Apply and follow by a saturated solution of bicarbonate of sodium. —PARVIN.

TYPHOID FEVER.—

℞ Essence pepsin..... ʒ i
Dilute nitrohydrochloric acid.. ♏ x
Glycerin..... ♏ xx
Water .....q. s. ℥ ss
M. Sig. Dilute with half a glass of water and give small quantity every hour. —NORWAY.

TOXIC AMBLYOPIA.—

℞ Strychninae sulphatis .....gr. $\frac{1}{65}$
Amorphous quassine .....gr. $\frac{1}{6}$
Powdered rhubarb. q. s.
M., ft. pil. Sig. Two to three daily, before meals. —TERRIEN.

DANDRUFF.—

℞ Cerae albae ..... ʒ iiiss
Ol. petrolati .... ℥ iiss
Aq. rosae..... ..... ℥ i
Sod. bibor.....gr. xv
Sulphur. praecip..... ʒ iiiss
M., ft. ungt. Sig. Apply daily or every few days. —JACKSON.

CYSTITIS.—

℞ Liq. potassae..... ʒ ij
Mucil. acaciae ..... ℥ i
Tinct. hyoscyami .....q. s. ℥ iv
M. Sig. ʒ i q. 4 h. —FOSTER.

The American Therapist.

A MONTHLY RECORD OF MODERN THERAPEUTICS,

WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

VOL. XI. NEW YORK, APRIL 15, 1903. No. 10.

Original Articles.

THE SURGICAL TREATMENT OF ABDOMINAL SINUSES OR FISTULÆ.

By ABRAM BROTHERS, B.S., M.D.,
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The ordinary forms of ventral fistulæ and sinuses are usually the results of surgical work on, or of injuries to, the organs contained within the abdominal and pelvic cavities. Although abscesses in the abdominal wall may leave sinuses, they heal, as a rule, spontaneously or after simply incising them freely and scraping, or after the use of the curette alone. These are of no great importance and will receive no further attention in this short paper.

Ventral fistulæ or sinuses may lead to the bladder or ureter, to intestine, to gall-bladder, or to other organs or parts within the abdominal or pelvic cavities. Foreign bodies left in the depths of the wound at the time of operation may keep up pus-formation, with a resulting suppurating tract, for an indefinite period of time.

I have had as yet no personal experience with abdominal fistulæ due to injuries to bladder or ureters and discharging urine; but the amount of work which I am obliged to do in connection with pus-tubes, fibroid uteri and other intra-pelvic conditions makes this contingency possible at any moment. I have injured the bladder and ureter while working on difficult cases *per vaginam*, with resulting uretero-vaginal and vesico-vaginal urinary fistulæ; but the present paper is not concerned with such cases.

Biliary fistulæ are regularly left after operations on the gall-bladder for stones, when it is deemed inadvisable to close the wound in the gall-bladder. These fistulæ ordinarily heal spontaneously when left to nature. I have had three cases in which secondary operations were necessary.

Case I. A woman of sixty presented a globular tumor, below the liver region, of a fluctuating character. There were absolutely no symptoms of any kind. Laparatomy was done and the gall-bladder, after being stitched to the abdominal wall, was opened next day. A number of gall-stones were removed excepting one which lay in the cystic duct and could neither be extracted nor crushed. For many months the fistulæ discharged bile, and repeated efforts to dislodge the stone failed. Finally, after giving up all hope of the spontaneous expulsion of the stone, she visited one of my hospital colleagues during my absence from town, and apparently without much trouble he was able to seize the stone and remove it from its bed. The patient rapidly got well after this and the fistula healed.

Case II. A woman of forty-five was operated by an eminent surgeon in a similar manner for suppurative cholecystitis due to gall-stones. After removing the stones, a permanent biliary fistula was left, and all his efforts to cure it were futile. After a year she was ready to die because of the misery resulting from the continuous and profuse leakage of bile. In this case I opened the abdominal cavity and with the Murphy button anastomosed the gall-bladder to the duodenum. The button was never recognized in the stools, but the patient's biliary fistula was permanently cured. She is well to-day,

although the operation was done three years ago.

Case III. The patient was the sister of a physician, and had suffered from a fistula in the right abdominal wall, midway between the free border of the ribs and the crest of the ilium. The origin of the case was very obscure. She stated that nine years previously, while crossing the ocean, a large swelling of the abdominal wall had suddenly burst, discharging a large quantity of purulent matter. When examined a glairy discharge was present, and the probe apparently passed downward toward the pelvic cavity. An exploratory section seemed to point toward no involvement especially of the intra-peritoneal viscera, and, after separating some adhesions, the sinus tract was exsected and the peritoneal cavity closed. The fistula recurred, however, and this time it was possible to trace it in an upward direction and recognize it as a biliary fistula. Although cholesterin was present in the discharge, the hospital internes failed at any time to find biliary elements in it. At the second operation the gall bladder was recognized displaced in the right loin and a number of gall-stones could be felt. The incision was extended to the right and the very much shrunken gall-bladder brought to view. A number of stones were removed and the entire gall-bladder, including a portion of the cystic duct, was exsected. The patient made a slow recovery.

Fecal fistulæ are usually due to injuries to the intestine, and may occur in connection with operations for pus tubes, chronic pelvic inflammation, hernia, or appendicitis.

The fecal fistulæ which occur after such injuries—when the patient is not lost before their formation through septic peritonitis — usually heal spontaneously. I have had a number of such fortunate experiences. Two of my cases are of especial interest.

Case IV. While trying to get up the appendix in a particularly bad case of peri-appendicular abscess in a man I tore a rent in the cæcum of at least one inch in length. After removing the appendix, I sewed the rent in the intestine with two tiers of Czerny and Lembert sutures. The fragile condition of the inflamed intestinal wall at the time made the possibility of union very doubtful. As a matter of fact, he recovered with a fecal fistula which healed spontaneously after several months. Although several years have elapsed he has remained permanently cured.

Case V. A gynecologist had removed uterus and purulent adnexa in a woman, leaving a fecal fistula. An attempt to cure this, by sewing over the rent, was subsequently made by another surgeon. Many months later, this operation having proved unsuccessful, I re-opened the abdomen and located three openings in the small intestine. After exsecting some six inches of intestine and making an end-to-end anastomosis with the Murphy button, the fecal fistula recurred. I imagine that possibly some other point of injury to the intestine was overlooked at the time of my operation, although no less a surgeon than Dr. H. M. Silver kindly assisted and supervised during the work. I lost sight of this case, as she refused to have anything more to do with me.

The most frequent form of ventral fistula is met with in connection with intra-pelvic surgery on the adnexa. These fistulæ heal spontaneously in the course of time. I do not advise interference in such cases until at least a year or eighteen months have elapsed. I have known at least two such cases to get well spontaneously after a year or two, when the patient would bring me a pedicle ligature of silk, which had evidently kept up the chronic suppuration. For this reason principally I have not used silk in my intra-peritoneal work during the past six or eight years. In one case, after a pyosalpinx operation, in which no silk ligatures were used, I could not clearly understand why my wound failed to heal, until one day, at the change of dressing, a

piece of forgotten gauze-sponge made its appearance. Its removal was followed by the rapid recovery of the patient. The histories of two cases operated for persistent sinuses of this character may prove of interest.

Case VI. A young woman had been operated two years previously by a prominent gynecologist of this city, and a ventral sinus was left. I dissected out the suppurating tract in the abdominal wall and then opened up the abdominal cavity. I found a great many intestinal adhesions and a fistulous tract, formed by such adhesions, leading down to the pelvic cavity. I broke up these adhesions as thoroughly as possible and searched for a pus focus or a silk ligature. Failing to find either, I closed the wound completely, without drainage, and succeeded in curing the patient.

Case VII. In July, 1901, a young woman of twenty-eight had had a pyo-salpinx removed by laparatomy, at Capetown, South Africa. She was discharged two months later with an abdominal sinus. I saw her on June 16, 1902, with a pelvic fluctuating mass in the right pelvis and a ventral fistula, which could be probed to a depth of two inches. During the following month one of our most prominent hysterectomists removed her uterus successfully *per vaginam.* Before discharging her from the hospital a secondary operation was done, during which a tube was passed from the abdominal opening out through the vagina. After a time she was discharged with the unconsoling information that her ventral fistula was incurable and she would have to suffer from it during the rest of her life.

On January 14, 1903, I dissected the sinus on a sound out of its surroundings to a depth of several inches. An unexpected and profuse hemorrhage occurred as the point of the sound punctured the wall of the sinus in the depths of the pelvic cavity. This was controlled by gauze packing, and I desisted from further dissection, but contented myself with amputating the fistulous tract at as low a point as I thought safe. With the finger passed through the lumen of the stump as a guide, a drainage tube was drawn through the vaginal scar up to and through the lower end of the abdominal wound, where both stumps and tube were secured by sutures. After discharging pus for some time, the abdominal wound finally and permanently closed, leaving a sinus discharging pus *per vaginam,* which, I expect, will in time entirely close. At all events, my patient is exceedingly gratified at having been rid at least of her abdominal fistula, and does not mind the little vaginal discharge, for which she douches as she would in an ordinary case of leucorrhea. In this case, I am frank to say, I only converted one form of fistula into another. But is it not a great achievement of modern surgery to be able to convert an abdominal fistula into one discharging *per vaginam?*

112 East Sixty-first Street, New York City.

Ergot in Hemorrhage.—Wm. B. Fenn (*American Medicine,* December 27, 1902) concludes:

1. In profuse hemorrhage from the lungs, appearing in mouthfuls, the likelihood exists that an artery of considerable size is ruptured or eroded, and our object should be to quiet the circulation and lower the blood pressure. We should use rest and such drugs as aconite. Under such circumstances ergot should never be given.

2. In slow oozing the source of the bleeding is usually the congested capillaries in the mucous membrane. Ergot may stop the bleeding by constricting these capillaries, but as such hemorrhage is usually decidedly beneficial and stops when the congestion is relieved, and as ergot is not well borne by the stomach and is decidedly disagreeable to take, the use is also here rather contra-indicated than otherwise. Digitalis, which also contracts the capillaries, would be quite as useful, and I am told that Trudeau, at Saranac Lake, uses the drug for this purpose.

3. Uterine hemorrhage seems to furnish the preëminent, and perhaps the only, indication of ergot as an internal styptic.

RENAL CALCULI: AN AID TO DIAGNOSIS, WITH THERAPEUTIC SUGGESTIONS.

By R. ABRAHAMS, M.D., New York City,
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The presence of stone in the kidney, as a rule, gives a clear and unmistakable history, and the diagnosis is therefore easy. Yet it is not unusual to cross a case which defies all previous experience. In such cases, as well as in others, the X-ray has been pressed into service. But the "ray" is not *always* a light that never fails. And even assuming that it is infallible, the frequent inaccessibility to the apparatus must for some time remain a hindrance to the general employment of the Röntgen light as an aid to diagnosis.

In view of these considerations, the revival of an old but neglected symptom must necessarily be of great value. The symptom, the nature of which will be stated later, has the following points to its credit: 1) It signalizes the existence of renal stone as nothing else will; 2) it helps to differentiate stone in the kidney from stone in the gall-bladder; 3) it removes doubt and suspicion from all ills that the appendix vermiformis is heir to; and 4) last but not least, it affords an opportunity to anticipate and ward off an attack of renal colic.

Some years ago I observed a series of cases of renal calculi, in each of which the presence of the foreign body in the pelvis of the kidney was heralded many days in advance by distinct, pronounced and appreciable pain and swelling of the testicle in the male and the ovary in the female.

So severe was the genital disturbance in each instance that the patients were severally treated for orchitis, epididymitis, or ovaritis. And not until the outburst of renal colic, accompanied, as it was, by the passing of stone, gravel and bloody urine, did the genital phenomena abate and were things restored to their normal condition.

The symptom spoken of consists of a dull, dragging pain in one or the other testicle, corresponding to the side of the kidney which harbors the stone. The pain is often acute and attended by swelling or tumefaction of the organ. This condition may exist absolutely without pain in the region of the affected kidney. Increasing experience and observation tend but to corroborate a statement made in a paper published in the *New York Medical Journal*, September 11, 1897, under the heading of "The Genital Phenomena of Renal Calculi," and which I venture to reiterate here: "The interpretation of the genital phenomenon as an expression, signal, or forerunner of the presence of renal calculi and the approach of renal colic is very much overlooked. Yet, I am sure, if due significance were accorded to it, at least an attack of colic could be averted in many a case. Old sufferers from stone in the kidney will tell you that the testicle acts as a barometer in foretelling the approach of the storm, namely: the renal colic. The feeling of uneasiness, the dragging sensation, the pain and puffiness of the organ in these old victims constitute what one might call a testicular aura of no mean importance to them and their medical attendant."

The genital phenomenon in many cases is the only suggestion of renal calculi, and as it may, as it often does, manifest itself days and weeks before an attack of colic occurs, it is only those who do not wish to see who will blind their eyes to the real source of trouble.

Guided by this important sign of renal calculi, the differential diagnosis between stone in the kidney and hepatic stones could easily be made. It is needless to mention that sometimes such a differential diagnosis taxes the acumen of the best observers.

At this junction it may be well to state that the importance attached to this invidious symptom of renal stone is not a figmy of the writer's imagination. Reference to the writings of Drs. Matthew D.

Mann and James H. Etheridge will convince the reader of the significant relation which exists "between lithemia and diseases of the pelvic organs in women."

The late Dr. Paul F. Munde "recollected quite a few women who presented themselves for treatment and had been treated for ovarian disease, but who subsequently went through attacks of renal colic and got well—the ovaritis in each case was only a reflex phenomenon of renal calculi" (Oral communication).

Dr. H. C. Coe, in accepting the invitation to discuss the above-mentioned paper, which was read before the New York County Medical Association, referred to a similar observation "in one case."

Dr. Joseph E. Janvrin, who presided at the meeting, said privately that he met with an instance "in a lad" who showed symptoms of orchitis a few days before an attack of renal colic. The orchitis passed away with the attack.

Lastly, Dr. L. B. Bangs, in discussing my paper, "recalled a hospital case in which the patient had what was supposed to be tuberculosis of the testicle, but after a time he passed a stone, and the case cleared up."

Now, assuming that the so-called "testicular aura" is timely recognized, the next consideration is: What means are at our command to ward off an impending attack of renal colic? In fact, the question could be advanced a point further, namely: What is the best weapon to combat the dire diathesis of nephrolithiasis? *Water*, is the unequivocal answer. The ingestion of copious draughts of distilled water is the great panacea for the prevention of colic and the removal of its cause.

Water is by far the most important agent among the innumerable therapeutic measures in the treatment of nephrolithiasis. It has no peer as a solvent and diluent. To be successful in the treatment of a case of the uric acid diathesis, whether there be stones in the kidney or not, the patient must be made to understand that in water is his salvation. Three or four quarts of distilled water per day, taken at regular or irregular intervals, will act magically. The aversion to water, which exists in many patients, particularly women, is to be overcome by slow but sure education. The larger the quantity the better the result. The best habit that the nephrolithic patient can acquire is the water-drinking habit, as he who is afflicted with the uric acid diathesis is planted upon a soil which needs continuous irrigation.

Under the beneficial action of pure water the diet need not be restricted, and the pet indulgencies, such as wine, beer and tobacco, need not be interdicted.

The water which I am in the habit of recommending is that prepared by Carl H. Schultz, of this city. This water answers every prescribed requirement and is not expensive.

For drugs, old and new, and mineral waters, I have but little praise. The alkaline waters, as well as drugs, if long continued, frequently derange the stomach and intestines. Indeed, I often suspect that they encourage the formation and growth of renal calculi.

Most of the coal-tar preparations which come to us from across the Atlantic, inflated and ballooned with alleged magic action, have proved in my hands absolutely valueless. One exception, however, must be made, that is urotropine. This drug is of value, perhaps not as a solvent, but as an effective genito-urinary antiseptic; besides, it has mildly diuretic qualities. In order to bring out the latter, however, urotropine should be washed down with a good dose of water.

Water, then, is the only element of treatment in nephrolithiasis upon which both the patient and the physician can sail safely, securely, and successfully.

43 St. Mark's Place, New York City.

FATTY HEART.—

℞ Extr. cimifugæ fluid.....
Syr. acaciæ ... . āā ʒ ss
Aq. amygdalæ amar..... ℥ iij
M. Sig. ʒ i q. 3 h. —ELLIS.

*CATARRHAL PNEUMONIA.**

By C. S. Lane, M. D., Jacksonville, Texas.

Catarrhal pneumonia, or more properly speaking, lobular pneumonia, is a secondary affection and almost always secondary to inflammation of the smaller bronchi. The objection to the term catarrhal is that it only signifies an inflammation of a mucous membrane. While it extends into the air cells and alveolar passages, and moreover, fibrin is very often present in the enduration as well as that of lobular pneumonia. This disease is frequent in childhood, in the aged and in debilitated persons. It is essentially an inflammation of the terminal bronchi and the air vesicles, which make up a pulmonary lobule. It is known as lobular, or broncho-pneumonia, in contradistinction to lobar pneumonia. The process in all cases begins with an inflammation of the capillary bronchi, which is a condition rarely ever found without involvement of the lobular structure. It follows as a sequel, or in fact may be associated with measles, diphtheria, whooping cough, scarlet fever, small-pox, erysipelas, typhoid fever, la grippe, or from laryngitis, especially in children, and, in fact, any inflammation of the air passages may extend into the air cells and alveolar passages, and lobular pneumonia ensue. It is very common in tuberculosis, and, in fact, if the disease should last longer than three weeks, it is very likely to be of tubercular origin.

My observation has been in this climate that the greatest number of cases that we have has been during an attack of la grippe, both in children and in adults.

The pathological changes occurring in lobular pneumonia have been divided—as in lobar pneumonia—into three stages, *viz.:* Stage of congestion or engorgement; second, stage of red hepatization, and, third, stage of gray hepatization. The difference is that in every particle of the inflamed area, one stage at the same time, while in lobular pneumonia it is confined to spots at various parts of the lung, ranging in size from a pea to a hen's egg, one spot being in one stage and the other in another stage. In fact, the different portions of the lungs may represent the three stages at the same time, one spot in the first stage and one in the second, and still another spot in the third stage. Consequently, we not only have one stage of the process to deal with at a time, but all the stages at once. It may be unilateral, but most frequently bilateral.

The treatment, whether tubercular or not, is the same. My treatment at the outset is first a calomel purge, and at the same time large doses of quinine. I also give Norwood's tincture in large doses, eight to ten drops every four hours. I know of nothing that will relieve the engorgement so promptly as these. At the same time I have applied turpentine stupes, entirely covering the afflicted area, and have them made thick in order to hold the heat as long as possible. I cover the wet clothes with a dry towel, or something to protect the clothing and assist in retaining the heat. Oiled silk is better, but many times we cannot get it, so I substitute a dry towel in its stead. I now follow up my treatment with spirits ammonia arom., spirits turpentine, tincture digitalis, and salol. I make this into a mixture, which makes a very pretty mixture, the turpentine dissolving the salol. I try to avoid so many mixtures, in order to give my patient as much rest as possible.

I keep up the quinine in large doses, and add to it strychnine in tablet form. To an adult I give with each dose of quinine from one-thirtieth to one-twentieth grain strychnine every four hours. I find that they bear it well, besides it is the best (I mean in adults) stimulant I can find. I give whiskey, both as a stimulant and a food. I have it made into an egg-nog or milkpunch, and allow them to

* Reprinted from the *Texas Medical News*, February, 1903.

have some of one or the other every two hours. My treatment, as a general thing, is supportive from the beginning. I also give them buttermilk or broths occasionally, and alternate in the feeding in order to keep them from becoming tired of any one thing.

For the high temperature, if it is very high, I give them some one of the coal tar preparations, but do not trust to it, for I think it too depressing on the heart's action and too diaphoretic. I use the sponge bath cautiously, sponging and resting alternately from one part to the other, until all the parts have been sponged off, using tepid water, than drying and covering with a dry garment and the bedclothing. The sponging occasionally, together with the veratrum, digitalis, etc., ought to be sufficient to control the temperature. I care nothing for the high temperature so long as my patient is quiet. Low muttering and delirium is an indication for stimulants, so when they begin this I push the stimulants the more.

The room should be kept at an even temperature, 65° or 68°, and should be kept moist with vapor; a vessel of water should be kept on the fire at all times to insure vapor in the room.

I think that expectorants do good only in one way; they loosen the expectoration and make them cough it off more easily. The eggnogs are also good expectorants, but usually I give them the following:

℞ Syr. scillae,
Syr. tolu,
Syr. prun. virg.,
Tr. opii camph.....āā ʒ vjj
Ol. picis .....gtts. x
M. Sig. Teaspoonful or less according to age, without water, after coughing.

In my hands it has been a most excellent expectorant.

I keep the bowels open. If necessary I give a little kassagra, or perhaps a little castor oil, as indicated.

I use antiseptics about the room, the same as in typhoid fever. I prefer carbolic acid. I keep my patient clean from the beginning. I change the clothing as often as I think advisable.

My aim is to give my patients rest and support them until they have overgrown the disease. If they do not sleep, I give them something to produce sleep. Bromidia, codeine, or papine, according to condition of stomach, etc.

I do not like a blister. I prefer the turpentine stupes as heretofore mentioned in adults, and for children I use flannels, made into a jacket and cooked in turpentine, tallow, or suet, and worn next to the skin.

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*A PLEA FOR THE EARLY OPERATIVE TREATMENT OF QUINSY, (PERITONSILAR ABSCESS).**

By J. Park West, M.D.

There are very few diseases in which the practician can afford his patient greater relief or shorten the period of his suffering more, than by an early successful incision of a peritonsilar abscess. It is not too much to say that a careful physician, especially after a little experience in this line, will be able to thus afford relief to 50 per cent. of his quinsy patients. It must be acknowledged by all who have looked into this subject carefully that we have no medicinal treatment for this painful affection. Aconite will not reduce the inflammation when it has once begun, and very seldom will it abort it. The writer has had patients, who, suffering with recurrent attacks, carry with them aconitin (others the tincture of aconite), so that they might begin treatment at the first symptom of the trouble, and only in a very few instances has it been successful. Medicinal agents do very little for the acute suffering. Solutions of cocain may give slight temporary relief; often the patient wearies of the application and prefers to endure the pain. The coal-tar group is ineffective. Opiates are dangerous owing to the likelihood of their causing œdema of the glottis. Gargles are painful, and hot applications are of doubtful utility. Of all

* Abstract from *The Cleveland Medical Journal*, January, 1903.

the remedies recommended it can be safely said that no one, nor combination, will shorten or alleviate an attack of quinsy.

The advice given in some text-books as to the operative treatment of peritonsilar abscess is wrong, especially in two particulars. The first is, to make the incision through the tonsil. It is rare indeed that the abscess is in, or discharges through, the tonsil. The second is, to make the incision where the abscess can be seen pointing. This prolongs the sufferings and almost always the abscess will be open before it can be seen to be pointing. Where does this abscess point? In the tonsil (rarely), or any place in the peritonsilar tissue. A short time since a man had his abscess open while on his way to the writer's office. An examination showed the abscess discharging through an opening one-eighth of an inch in the extreme lower edge of the anterior pillar. The location at which it most frequently points is above and to the inner side of the tonsil, but the place an incision should be made is where fluctuation is felt, and the time to make it is as soon as fluctuation can be felt. It takes considerable patience and some practice to locate this point early. Opening the mouth is painful, but a few trials will give sufficient room for the physician to work his finger far enough back to make a careful exploration. Fortunately these patients are usually adults and are willing to undergo a good deal for the promise of relief. This examination should be made as soon as the disease is suspected, and repeated at each visit until the thing sought is found. Early in the disease all the tissues in, above, and around the tonsil are hard and dense; but ere long somewhere in this dense tissue will be felt a softer spot that shows where nature is making an effort to discharge the pus, and there we can aid nature to the great relief of the patient. This spot should be carefully located with the finger, so that it can be fixed later with the eye. Under a reflected light, the tongue held down with a depressor, a vertical incision should be made. Very rarely will this procedure fail to discharge the pus and put an end to the trouble.

It is the opinion of the writer that this early operative treatment is not only curative of the attack, but, equally important, is to a large extent a preventive of future attacks. Not a few of the writer's patients thus treated have had no further attacks; others have had them less frequently and less severely.

Formalin and Its Compounds.—Formaldehyd, itself, is a gas, but it is usually employed in the form of the saturated aqueous solution known as formalin, containing 35 to 40 per cent. of the gas by weight. Of its compounds one of the most popular is urotropin, now recognized to be one of the most effective of urinary antiseptics. Practically identical with this, chemically and therapeutically, are the substances known as formin, aminoform, and cystogen. As external antiseptics we have such compounds as tannoform, thymoform, lysoform and creoform; the intestinal antiseptics containing some combination of formaldehyd include tannopin, naphthoformin, geoform and bismal; there is even a formaldehyd-containing food known as protogen. And so we might continue. The multiplication of these remedies is plainly a recognition of the merit of formaldehyd, both as an external and internal antiseptic. What adds greatly to its antiseptic value is its low toxicity as compared with such germicides as bichlorid of mercury and carbolic acid. It must not be assumed, however, that formaldehyd is non-toxic. Two ounces of a 4 per cent. solution have caused death, while even in small quantities it acts as a decided irritant to the mucous membranes—to the eyes and respiratory tract when inhaled, and to the digestive system when taken internally. It certainly retards digestion, may cause gastritis, and in large doses cause vomiting and weakness of the heart and respiration. Fortunately we have an effective antidote in ammonia, which also has the merit of acting as a stimulant.—*The Medical Standard*, February, 1903.

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Editorial.

VENEREAL PROPHYLAXIS.

The much mooted question of venereal prophylaxis that will at once prove practical and generally applicable to most countries and climes, is being brought to the fore once again, and discussion on the subject is noted almost weekly in our medical journals. So much has been said in the past on this subject, with its advice of routine examination, segregation, written cards for patients, prophylactic installations, and so little has been ultimately accomplished that we fear the laudable attempts at solving this very important but difficult question will bring us back to the starting point. It seems that one fault of the various conferences has been their international character. For it is a fact, which admits of no denial, that the conditions existing in various countries the world over, yes in the various states and cities, are so different that no fast and set rule can be adopted for all. With a view to a more possible concentration of energy in this country, it is interesting to note the joint resolution adopted at the fifty-third meeting of the American Medical Association by the sections of Cutaneous Medicine and Surgery and Hygiene and Sanitary Science, to wit:

"WHEREAS there is a burning necessity to check the spread of venereal diseases, and assuming that the States cannot with impunity ignore the condition, it lies in the province of the medical profession to discuss and recommend to the respective State Legislatures and Municipalities means not regulamentative, but social, economic, educative, and sanitary in their character, to diminish the danger from venereal diseases. RESOLVED, that the Section on Cutaneous Medicine and Surgery of the American Medical Association invite the Section on Hygiene and Sanitary Science to co-operate with the Section on Cutaneous Medicine and Surgery in bringing about a propaganda in the different States, looking toward a proper recognition of the dangers from venereal diseases, and to arrange for a national meeting under the auspices of the American Medical Association for the prophylaxis of venereal diseases, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year at Brussels, under the authority of the Belgian Government."

There is no question but that a meeting of this nature would be productive of better results for our country than any international conference, and for that reason, if for no other, the idea is deserving of the support of the profession. As the secretary of the committee, Dr. LUDWIG WEISS, says: "The peculiar social, racial, and political conditions of our country are so different from those on the continent that they necessitate an expression of solely American ideas on this mooted question, both from a socio-economic and sanitary point of view."

Let us hope that, if the conference should come to pass, it will terminate in a practical solution of this intricate problem, and that in so doing the American profession will once more lead the way.

IN THIS ISSUE, DR. ABRAM BROTHERS, who has contributed to our columns on former occasions, has given us the benefits and results of his extended experience in surgical and gynecological work, selecting for consideration the surgical treatment of abdominal sinuses or fistulæ. His results clearly indicate that much may be accomplished in these cases by the exercise of

patience and ingenuity, and that no case is so hopeless as not to be given the benefit of repeated attempts at a cure. The operation in Case II, a cholecysto-duodenotomy, so to say, is an instance of what might be accomplished for the discomfort of a biliary fistula. The substitution of a vaginal fistula in Case VII, for the more disagreeable abdominal sinus, is another proof that modern surgery is ready to meet with almost any contingency. We are pleased to present to our readers an article embodying a personal observation and experience of many years, and embracing therefore practical ideas of great value.

There are Few Practitioners who have not at one period or another felt as if some sign or phenomenon, in addition to those already existing, would prove of material aid in establishing a diagnosis of nephrolithiasis. Unfortunately the symptom complex of this condition is so varied, depending as it does upon the size, nature, and situation of the concretion, that little wonder is expressed at the occasional call for assistance from the X-ray in the hands of a properly qualified expert. It is mainly in atypical cases that the differentiation from gall-stones, appendicitis, paranephritis, tuberculosis of the kidney, ovaritis, salpingitis, floating kidney and other diseases must be made. We have been favored in this number with a contribution from Dr. R. Abrahams, of New York City, in which he relates his experience in a series of cases with a testicular or ovarian pain occurring for several days or weeks before the threatened attack of acute suffering. Not every pain in the testicle or ovary is reflected from the kidneys, but the number of instances of renal colic, in which this phenomenon is the forerunner of more aggravated symptoms, seems sufficiently large to make us look with suspicion upon every pain situated in these regions and to enter carefully into the past and previous history of the patient. The suffering in renal colic is truly terrible and one attack predisposes to another. In primary cases this premonitory sign is very significant, and much good can come from assuming it to be the aura of an attack of nephrolithiasis; in secondary outbreaks we are safe in considering it to be the initial sign and in treating the case as one of kidney stone. The therapy formulated by the writer is simplicity itself, and as potent as it is readily applicable. Abstinence from water is without a doubt the cause of numerous ailments, and in women, who are usually the greatest offenders, it has resulted in much harm. Give your patients water, and plenty of it, if you will ward off renal colic, with all its untold suffering. There are those who will not take kindly to the idea of drinking Croton water, but who will partake of the necessary quantity when directed to drink some mineral water of more than doubtful utility. This, like many other instances in the practice of medicine, is a justifiable subterfuge.

Sufferers from quinsy or peritonsilar abscess will testify to the fact that this disease is one of the slowest, most tedious and painful affections, and that relief is experienced only when the pus is evacuated spontaneously, or by operative means. In an abstract of a paper by J. Park West, published in this issue, a plea is made for early operative treatment, because "it must be acknowledged by all who have looked into this subject carefully that we have no medicinal treatment for this painful affection." Emil Mayer claims that cases of quinsy, if seen at the very outset of the attack, may be aborted by the internal administration of gr. $^1/_{24}$ of morphine and 2 minims of veratrum viride, every hour for three doses, and then every three hours. His claims are based on an extensive experience and are therefore deserving of an extended trial. These patients are so accustomed to their recurrent yearly attacks that preventive measures would be to them a boon. If abortive measures prove inefficacious, or

if the process has advanced, then the advice given by Dr. West, that "the place an incision should be made is where fluctuation is felt, and the time to make it is as soon as fluctuation can be felt," is sound and calculated to shorten the period of suffering.

THERAPEUTIC NOTES.

For the chronic diarrheas of tropical climates Herschell has obtained excellent results from the use of powdered cuttlefish bone in doses of half to three drachms daily; a preliminary dose of castor oil is always given.

Ippoliti has successfully treated mucomembranous enterocolitis with rectal irrigations of a two per cent. solution of methylene blue and a pill of 1/6 of a grain four times daily.

Calvello claims that the hands may be rendered aseptic by using oil of cinnamon 9 per cent., thyme 12 per cent., and geranium 18 per cent.

In the treatment of noma Korsch advises an injection of diphtheritic antitoxin as an adjuvant to other measures.

Crandall claims that hiccough in infants may be controlled promptly by placing a few grains of sugar in the baby's mouth.

Brennan considers chloral hydrate, next to iodine, the counter-irritant of choice for children.

A concentrated solution of bichromate of potash is said to remove warts.

Three grains of black oxide of manganese, given three times daily for several months, has proven useful in dysmenorrhea.

Iodoform suppositories relieve the pain of *fistula in ano* and hemorrhoids.

Sexual impotence may result from the continued administration of camphor, bromides, morphine, alcohol, or tobacco.

Current Literature.

Eucaine-B as a Local Anesthetic. — When eucaine-a was introduced several years ago as a local anesthetic, it attracted much attention, since on account of its lesser degree of toxicity it promised to replace cocaine in many of its indications. These anticipations, however, were not realized, because the property of the new drug of causing hyperemia prevented its general use as a means of anesthetizing the mucous membranes, for which cocaine is so largely employed. Continued pharmacologic research resulted in the discovery of eucaine-b, which has already shown itself to be possessed of so decided advantages over cocaine that it is not too much to expect that it will prove a general substitute for the latter. In an elaborate experimental and clinical study, recently published in the *Deutsche Zeitschrift f. Chirurgie*, Hft. 5 and 6, 1902, Dr. Marsinowski gives an excellent description of the properties of eucaine-b and its therapeutic uses. It is only one-third as poisonous as cocaine, is soluble in three and one-half parts of cold water and much more soluble in warm water. The solutions are not decomposed by boiling, thus permitting of complete sterilization. When applied to the conjunctiva, the rapidity, duration, and intensity of the anesthesia are equivalent to cocaine. It produces a slight hyperemia, which is not objectionable, has no effect on pupils and accommodation, and leaves the cornea intact. Its analgesic effect on the nose and throat corresponds to that of cocaine, and the resulting hyperemia is not sufficient to act as a contraindication. In urethral surgery it is as efficient as cocaine and has the great advantage of safety. In general surgical practice it is capable of completely replacing cocaine as an anesthetic. It may be used by direct injection in small operations (½ per cent. solutions), and is well adapted for infiltration anesthesia (eucaine-b, 0.1; sodium chloride, 0.8; water, 100),

and is also suitable for spinal analgesia. The injections are not painful, the anesthesia is complete in one to three minutes, and lasts up to forty minutes. The average strength of solutions for the eye is 2 per cent.; for the urethra up to 3 per cent.; for the nose and throat, 5 to 10 per cent.; for dental work 2 to 5 per cent. (1 cc.).—*Intern. Journal of Surgery*, Feb., 1903.

Cannabis Indica in Nervous Diseases.—M. E. Fitch (*The Med. Times*, Jan., 1903) says: The difficulty of obtaining reliable preparations of cannabis indica is one of the chief obstacles to its use. Reynolds has had exceptional opportunities to get good cannabis indica, and the results of his administration of the drug during a number of years lead him to believe that, when pure, and carefully administered, it is one of the most valuable remedies we possess. Some of its most remarkably valuable results are to be found in curious conditions of the mind. For example, in senile insomnia with wandering; where an elderly person, probably with brain softening in the "delirium form," is fidgety at night, goes to bed, gets up again, thinks he has some appointment to keep, and must dress himself and go out to keep it; but it is quite radical during the day, with its stimuli of real occupations. In this class of cases nothing is comparable in utility to a moderate dose of Indian hemp; one-quarter to one-third of a grain of the extract given at night. It has been absolutely successful for months and, indeed, years, without any increase of the dose.

In alcoholic delirium it is very uncertain, in melancholia it is sometimes of service, in mania it is worse than useless, either in the chronic or in the acute form. In the occasional night restlessness of patients with general paralysis it has proved of eminent utility. In almost all painful maladies, like neuralgias and migraine, it is the most useful of drugs. The lightning pain of ataxis patients, and the multiform miseries of tingling, formication, and numbness, so common in the limbs of gouty people, are relieved by it. On the other hand, it has proved useless in sciatica, myodynia, gastrodynia, and enteralgia. The drug should always be obtained from the same source if possible, and that a minimum dose should be given to begin with, and that the dose should be very gradually and cautiously increased. Toxic effects were caused by one-fourth, but never by one-fifth of a grain of the extract, therefore one-fifth is a good beginning dose for an adult, one-tenth of a grain for a child.

The best form is the tincture, in drops, on a small piece of sugar or bread; if given in a mixture it is apt to separate and give uneven doses. Pills often become hard and insoluble, and their strength cannot be so readily and so gradually increased. For adults, where a gradually increasing dose is required, a tincture with a strength of one grain of the extract in ten drops of the tincture is useful. Two drops of such a tincture may be useful, repeated in not less than four to six hours, and gradually increased by one drop every third or fourth day, until relief is obtained or the drug proved useless.

Arsenic in Chorea.—F. M. Pope (*British Medical Journal*, October 18, 1902) says: The treatment of chorea with arsenic is inadvisable in very acute cases with coma or paralysis, in that have been treated for some time with small doses of arsenic, in those in which there is reason to suppose that the rheumatic process is going on in the acute form, and in cases of advanced cardiac disease. The writer gives the following principles for the administration of arsenic in the treatment of chorea: See that the tongue is clear before commencing treatment, and, if not, give a mild mercurial purge and a stomachic mixture for forty-eight hours. Put the patient on a bland and easily digested diet. Give the drug in a much diluted form and in the same dilution throughout. Do not discontinue on the first attack of vomiting, which may be due to acciden-

tal causes. Increase the dose daily. Keep the patient in bed throughout the treatment. If the vomiting persists, discontinue the drug for twenty four hours and then give the same dose as the last. Examine the patient very carefully daily for any sign of toxic action. What must be aimed at is a form of shock action on the nerve-tissues, and this may explain why long-continued treatment with small doses fails. On discontinuing the arsenic the writer usually gives a mixture containing iron for a few days.—*The Monthly Cyclopedia of Practical Medicine*, Dec., 1902.

ACETANILID VS. IODOFORM. — W. D. Richardson (*International Journal of Surgery*, January, 1903) writes :

My attention was first called to acetanilid as a dusting powder several years back, when looking for something to displace iodoform — that drug of malodorous notoriety — in the treatment of venereal sores, chancres, condylomata and chancroids, my patients almost invariably complaining of the fearful odor of that drug. I tried several powders, such as bismuth, oxide of zinc, tannin, boric acid, etc., with varying success, but not sufficient to warrant me in dropping iodoform. Among the other powders I tried was pulverized acetanilid, and I found that it had remarkable drying and healing properties.

About this time I saw an article in the *Medical News*, by Dr. F. Harrell, calling attention to the remarkable anti-pyrogenic powers of acetanilid, and stating that dirty, greasy, crushed wounds received in mining, railroading, on the street, etc., would heal by primary union with very little pus. I began to experiment with it as a dressing for cuts, scalds, burns, and such injuries as usually come to one engaged in general practice. Now I use it for almost all injuries that I come in contact with, to the exclusion of nearly all other dusting powders. I have not used an ounce of iodoform during the past ten years, but have used pounds of acetanilid and boric acid, which I sometimes employ as a diluent with the acetanilid if there is a large surface to cover. I mix it in various proportions, from 1 to 3 to 1 to 15, because acetanilid is somewhat rapidly absorbed, and if applied too freely may produce toxic effects, although I never have seen any poisoning in my practice. Cases are reported, however, where it has produced its well-known systemic effects, such as dizziness, cyanosis, feeble and slow pulse, subnormal temperature, slow and shallow respiration, dilated pupils, vomiting, delirium and coma — especially where it has been used freely in the treatment of the young or aged — although I know of no instance where it has produced death, and it has been taken internally in exceedingly large doses, one person taking 7½ dr. with suicidal intent. It produced the usual symptoms, and also albuminuria and hemoglobinuria, but upon administration of stimulants, such as alcohol, strychnia, and atropine hypodermically, the patient recovered.

Various cases are on record in which one, two, three, and even four drachms have been swallowed accidentally, with no deaths, while thirty grains of iodoform have produced death. Besides, iodoform will cause a local irritation of the skin; acetanilid under no circumstances will have this effect.

Iodoform sometimes actually defeats the object for which it is used. One St. Louis physician reports a case of eczema covering the entire front of the arm, which was being treated with iodoform unsuccessfully; upon the withdrawal of the drug and use of some simple drying powder it rapidly healed. Besides it has been demonstrated bacteriologically that staphylococci, streptococci, and pus-producing germs will flourish in an iodoform culture medium, which goes to prove that iodoform has been vastly overestimated as a germicide.

I think it probable that, where we have violent and persistent vomiting after an anesthetic in cases in which iodoform has been used as a dressing, the vomiting is

aggravated and prolonged by the smell of the iodoform, while acetanilid has been used successfully to prevent vomiting following the anesthetic ; some operators invariably leaving three-grain powders to be administered by the nurse.

Acetanilid, when first applied to a wound, produces a slight burning sensation, then acts as an anesthetic, prevents the formation of pus, forms a scab under which healing progresses favorably and rapidly; but in very rare instances in the aged it seems to retard granulation.

Hydrastis and Its Alkaloids.—*The Alkaloidal Clinic*, November, 1902, says :

The indications for hydrastis and its alkaloids are as follows :

Hydrastis (the crude drug).—Indicated in all chronic catarrhal conditions of the mucous membranes, with relaxation of tissues and profuse secretion. Also as a local application, tonic, astringent and antiseptic, in all the above conditions where it can be applied directly. Also as a simple bitter, to improve the appetite and digestion and tone up the general system. Contra-indicated in all acute inflammations, with arrest of secretions.

Hydrastin (the concentration) has substantially the same indications.

Berberine (the yellow alkaloid).--Special actions, to produce contraction of muscular and connective tissue. Special uses, in enlargement of the spleen, where its most brilliant results have been produced ; in subinvolution of the uterus, uterine fibroids, dilatation of the stomach, and wherever it is necessary to combat relaxation, atony, or defective contractility of tissue. Theoretically it should prove of value in dilatation of the heart and enlargement of the liver.

Hydrastine (the white alkaloid).--Special action, to produce contraction of the arterioles. Special uses, in capillary hemorrhages of all kinds, particularly genito-urinary hemorrhages.

Hydrastinine (the derived alkaloid).—General actions and uses, similar to those of hydrastine, but contracting the capillaries more strongly and having a greater tendency to act upon the uterine vessels. Hence its specific use as a uterine hemostatic.—French, in *Merck's Archives*.

Paraffin Injections for Nasal Deformities.—*The St. Louis Clinique*, January, 1903, abstracts a paper by Dr. Stephen Paget and states that the following considerations are to be noted :

1) Whatever may be the melting point of paraffin, it must be kept, during use, 10° or 15° higher, or it will solidify in the needle before it can be injected.

2) For the same reason, the needle and syringe must be kept 15° or 20° higher than the paraffin. The loss of heat from the syringe may be to some extent checked by casing it in a bit of drainage tube.

3) An ordinary glass antitoxin syringe, with a well fitting asbestos piston, answers every purpose. The needle must be broad and strong, such as is used for exploring the pleural cavity; but the needle generally used for this purpose is too long, and should be shortened to an inch and a half.

4) An assistant must make firm pressure, very carefully, all round the nose, and must keep up this pressure till the paraffin is set. But it sets almost at once, allowing only a quarter or half a minute to the surgeon to mold it. The firm pressure may be helped by the use of a strip of lead or pewter under the tips of the fingers.

The skin of the nose, at the point where the needle is to enter, should be just nicked with a scalpel, so that the needle may pass easily. It is best to direct the needle downward, away from the eyelids, and to introduce it at the middle line of the nose.

6) Eckstein's paraffin, melting at 136°, is difficult to use, and must be very quickly transferred from the bottle into the subcutaneous tissue. Probably it is best suited for a case where only a very small quantity of paraffin is required. With this

paraffin the syringe must be kept so hot that it can hardly be handled except with gloves.

One case has been recorded of sloughing of the skin, presumably from heat. This disaster could hardly happen with paraffin melting at 115°. More than one case has been recorded where signs attributable to pulmonary embolism followed the injection. It is, therefore, necessary to avoid piercing a vein, and to keep firm and close pressure all round the nose during and after the injection.

8) After the treatment a fold of lint should be kept over the upper part of the face, and kept moist with cold or iced lotion. In the two cases quoted there was little or no pain after the operation, but some swelling round the nose for three or four days.

It is, of course, impossible by any method to make a narrow or refined bridge to the nose in these cases. The front view of it is still heavy and clumsy, but the profile view is excellent, and this good result is obtained without any scar and without any severe or difficult operation in a few minutes.

SUBLAMINE.—*The Virginia Medical Semi-Monthly*, December 26, 1902, says:

Kronig and Blumberg, of Berlin, in 1900, recognizing the drawbacks to the use of mercuric bichloride as a surgical disinfectant, general antiseptic, and parasiticide, induced the Schering factory in Berlin to prepare for them a combination of mercury with ethylenediamine, which has been named *Sublamine*. It is composed of three molecules of mercuric sulphate and eight molecules of ethylenediamine, and contains about 43 per cent. of mercury. It occurs as white, needle-like crystals, which readily dissolve in water, but are only slightly soluble in alcohol. Experience and general observations have convinced all who have used it that it has not the disadvantages of corrosive sublimate; on the other hand it has all the good properties to which mercuric chloride owes its effectiveness. In fact, it has the following advantages: 1) Sublamine dissolves instantly, causing a pleasant softening of the water; 2) disinfection by sublamine does not require the amount of time demanded by the older methods; 3) nickel-plated instruments are not attacked by sublamine solutions, hence such instruments may be sterilized by such solutions; 4) sublamine is absolutely non-irritating; it does not attack the skin, even in strengths of 1:50 solution; it never causes the desquamation or irritation, or eczema, etc., which mercuric chloride so frequently produces—even in solutions of 1:1,000; 5) sublamine penetrates deeper into the tissues than does sublimate—due to the ethylenediamine, which the former contains; 6) sublamine does not precipitate soap solutions, hence preserves its disinfecting power in the presence of suds—in contradistinction to sublimate; 7) solutions of sublamine of one per cent. and stronger do not coagulate albuminous material of the same strength—even at a temperature of 109° to 113° F. Solution of corrosive sublimate 1:1,000 coagulates albumin solutions at ordinary room temperature. This advantage of non-precipitation is readily apparent when blood-covered hands are immersed in sublamine solution; no brown precipitate on the hands is formed thereby.

Sublamine can be advantageously employed in all cases in which bichloride of mercury is indicated. It especially promises to play an important rôle in obstetrical, gynecological, and dermatological fields.

For vaginal irrigations, sublamine solutions of 1:1,000 or 2,000 should be employed in cases of leucorrhea, after miscarriage, etc. Dr. M. A. Goldstein, Professor of Otology in Marion-Sims Beaumont College, St. Louis, has employed a 1:2,000 solution in syringing and flushing after mastoid operations with good effect. In Dr. Emil Senger's clinic, Crefeld, Germany, it has been used in the place of corrosive chloride as subcutaneous injec-

tion in 1:500 solution, without the addition of sodium chloride, and with very satisfactory effects. It caused no irritation at all.

Sublamine is obtainable only in the form of 1 gram (15 grains) pink-colored tablets, 20 in a tube.

When about to use sublamine for the surgical amphitheatre, etc., wash the hands with lukewarm water and soap (preferably soft or sand soap); scrub with brush eight to ten minutes, and rinse well in water. Then treat the hands, etc., with a nail brush and warm 1:1,000 solution of sublamine—made by dissolving one tablet in one quart of water. Alcohol need not be employed. When an immediate and more superficial disinfection of hands only is required, as after visiting an infectious disease patient, thorough washing with 1:1,000 solution will suffice.

Chlorid of Aluminum for the Pains of Tabes Dorsalis. — Given Campbell (*St. Louis Medical Review*, Jan. 3, 1903) says:

Two years ago Dr. Gowers, of London, in a paper on therapeutics, spoke rather casually of a treatment for these pains that he had discovered and reported to some local society. The remedy in question was the chlorid of aluminum. In the article, to which I had access, the dose was not given, nor the method of administration, and I could not obtain his original report. Having occasion to see a patient at the City Hospital a few days after reading Gowers' paper, in whom these pains were especially severe and resistant to all forms of treatment, I suggested to Dr. Amyx that the chlorid of aluminum be tried. Some of the salt was purchased from a chemical supply house, the druggists not keeping it. A three percent. solution was made and the patient put on three-drop doses cautiously increased. The pains ceased, but being so notoriously capricious a symptom, there was an inclination to attribute his recovery to chance and little more was thought of the matter until, at a visit some months later, I found that on a return of the pains he had asked for some more of the medicine, but the hospital being at the time unable to supply him, he had sent a friend out and with his own money bought some and taken it again with a completely satisfactory result. He had then told several other patients similarly afflicted, and they had purchased the remedy and were completely relieved. This attracted my attention to the treatment, and I employed it in several cases, both in private and clinical practice, where the results could be accurately observed. I found that in overdoses the salt was a gastric irritant, causing a furred tongue, anorexia, malaise and gastric pain, coming on shortly after each dose, with occasional diarrhea. That these symptoms occurred in some patients when the dose reached about six centigrams three times daily, given after meals, largely diluted. Some patients tolerated twice this amount with no inconvenience. The pains were usually controlled before the dose reached five centigrams — one-half grain. This dose, one and one-half grains daily, has been given by me to a number of patients for periods varying from a year to less, with absolutely no disturbance of the digestion or the general health. On the contrary, the immunity from the pains has enabled them greatly to improve in general health, and this improvement has reacted favorably on the other symptoms of the locomotor ataxia.

Recently I have employed aluminum chlorid in other pains than those of tabes. I have found that in neuralgias, in which the paroxysmal element enters strongly, occasionally much benefit is attained. In other cases, apparently similar, no relief is found. In the gastric crises of tabes I have not met with success, but do not find that aluminum chlorid in proper doses, given for the fulgurant pains, will in any manner aggravate a tendency to gastric crises, nor to any other of the tabetic symptoms. How this accomplishes these certainly brilliant results in fulgurant

pains I am at a loss to explain. It is very surely not a narcotic, nor does its use even in full doses cause the slightest somnolence. It does not seem to be an analgesic. And, in my opinion, it so modifies the disease process in tabes that the pains are no longer a part of it, thus not subduing the pains, but so modifying the disease that there are no frequent forms to subdue.

A result such as this, attained without the use of narcotics or heart-depressing analgesics, and with a certainty that amounts almost to specificity, is well worthy of a trial, especially in a class of patients who, in addition to these pains, have much to make their lives miserable. That this short report may be the means of inducing some of those here this evening to give it a trial, is the earnest desire of the writer.

Icterus. — E. Hirtz (*La Médicine Moderne*, September 3, 1902) says: There are three rules to be observed in the treatment of genuine jaundice: 1) To see that the biliary passages are patent: 2) to keep a careful watch on the eliminative power of the kidney; 3) to adopt all possible means of getting rid of bile from the system. No point is of greater importance in the treatment of this malady than is the regulation of the diet. In the early stages nothing is better than an absolute milk diet, and if the milk is too rich in cream it should be skimmed. Milk may often be diluted with Vichy water with advantage. Sometimes iced milk is well borne, sometimes not; but in no case should pieces of ice be added to the milk. Occasionally asses' milk is better borne than that of the cow. When a more liberal diet becomes necessary, care should be taken to exclude fats, eggs, and alcohol. A vegetarian diet is preferable to all others. Carrots have been recommended, and are much used at Vichy. To keep clear the bile passages it is usual to make use of purgatives, but drastic aperients must be avoided. Sulphate of soda acts well, and calomel may be given from time to time. The author refers to the fears which were at one time entertained with regard to the ingestion of salts or acids when calomel was given. It was thought that perchloride of mercury would be formed. This opinion is no longer held. The author recommends the employment of cold enemata. These should be given in the morning, and should consist of one or two litres of water at 15° or 18° C. Intestinal peristalsis is thus easily induced, and it is possible that contraction of the gall-bladder may also ensue. Further, enemata of this nature increase diuresis. Salicylate of soda s the favorite drug of the author, but he does not give more than a gramme for a dose. It is useful, he thinks, in chronic jaundice. Massage may be useful, as also may faradization, which the author prefers to galvanism. One electrode is placed over the hepatic region, the other on the spinal column. In some cases in which dropsy of the gall-bladder ensues it may be necessary to puncture the latter. When fetid colitis occurs, doses of charcoal — 50 centigrammes to a gramme — may be usefully employed. — *Treatment*, December, 1902.

Angina Pectoris — E. W. Twitchell says that there is a marked difference between true and false angina. True angina is a distinct pathological entity. There is usually demonstrable post-mortem arteriosclerosis and stenosis of the coronary arteries. The symptoms can be separated from those of the false anginas. In the first place, true angina does not occur in the young, occurring more in people of middle age and of advanced years. True angina comes on directly from the false angina. The true form comes on from marked effort, as from stooping. It is rarely that true angina comes on at night; those which come on at night are usually false. The length of the attacks is different; in true angina they are short. False anginas, for the most part, are hysterical, coming on from fright, oftentimes spon-

taneously, and may last a long time. From a prognostic standpoint, the matter of diagnosis is important. If you are satisfied you have false angina to deal with, you have not much to fear; if it be true angina, your patient may die. Tobacco angina simulates hysterical angina, but lasts longer. A patient having an attack of tobacco angina may remain unconscious all night. I recently came across a case of genuine hysterical angina, that closely simulated true angina. It took me several days to make up my mind as to the existing condition. In the true angina you have to offset the ill effects of the arterio-sclerosis, and reduce the blood pressure. For long-continued treatment the iodid of potassium is best. Attention should be paid to dieting your patient, with a view to reducing blood pressure. Meats that are kept in refrigerators should be excluded, on account of the ptomains contained therein. Such patients should be put on a milk and vegetable diet. Blood pressure must be kept down, otherwise you are liable to have cardiac ischemia.—*Occidental Medical Times.—Modern Medical Science*, December, 1902.

Treatment of Neurasthenic Children.—J. Madison Taylor (*International Medical Magazine*, December, 1902) says in part:

For such little folks it is not enough to prescribe suitable medicines and enumerate casually a list of easily digested foods which the mother shall provide, nor to direct proper bathings, outings, and other general measures. A thorough systematization of the entire daily life of the child is infinitely more efficacious than the most accurately selected medicines or the use of that innumerable host of children's foods with which, in the form of specious descriptive circulars, the enterprising chemists flood our morning mails. The best tonic for the stomach is food carefully prepared and served, such as a fairly intelligent mother in even the humblest walks of life, if rightly directed, can readily afford, but always provided that the preparation, seasoning, the times and circumstances of administration be wisely chosen.

Predigestion of foodstuffs offers undeniable safeguards to the weakened, toneless digestive tract, but robs the pabulum too often of that savoriness which is essential to acceptability, and imperils appetite.

While exercising care as to quality and preparation of foods for weakly or neurasthenic children, it is imperative to bear in mind the need for suitable variety. A child will often be presented who is fed with the utmost care and regularity, oftentimes under the best of medical advice, and yet its progress comes to a standstill or it obviously retrogrades. Upon inquiry there will be revealed much sameness in the diet list, otherwise properly adjusted to the condition for which it was originally outlined. The little victim's soul comes to loathe and abhor the sight of flabby paps, occurring in dismal routine, or the same old wearying round of bread, meat, and a dab of vegetables. If to these is now added a more varied dietary, revising the *menu* day by day, even lapsing into a taste, now and again, of articles ordinarily forbidden, yet savory and tempting, great progress will soon be obvious.

Chronic Gastritis and Gastric Motor Insufficiency in Children.—F. L. Wachenheim (*N. Y. Med. Journal*, January 24, 1903) says: Lavage is of value only if there is very prolonged retention of ingesta, say, over twelve hours; in such cases the time is before breakfast, if possible; otherwise more will be achieved by diet, attention being directed to the giving of small meals at three hour intervals, the variety of food being adjusted as far as possible to the sufficiency of the gastric secretion as established by the chemical tests. Among drugs, nux vomica takes the front rank, acting as a general stimulant to peristalsis; it is well combined with bismuth and sodium bicarbonate to check fermentation, and magnesia to counteract the constipating tendency

of these two. Sometimes the constipation dominates the picture and requires the most attention, and in these cases I have found cascara sagrada the most valuable drug. When circumstances permit, massage should be employed; while inapplicable to the *clientèle* of a dispensary, in private practice its value is promptly made evident.

Strychnine in Progressive Deafness. — Berezovski announces that the subcutaneous administration of strychnine practically cured two patients with progressive deafness and annoying subjective sounds in the ears. It also attenuated or completely banished the sounds in seventeen out of twenty-two other cases of various orms of aural affections. He remarks that he has never known in his own experience, nor heard from others, nor been able to find in literature, a single instance of complete cure of progressive deafness by any means. Consequently he believes that the cure of two cases he reports, even if they were only two out of two thousand instead of being two out of two, should suggest further trials in this line. He has found strychnine useful also in amblyopia and other affections of the eyes. He injects the strychnine in the usual hypodermic dose. Other methods of administration proved ineffectual.—*St. Louis Clinique*, December, 1902.

Diabetes. — H. Eichhorst (*Therap. Monatshefte*, XVI, No. 9), of Zurich, contributes an able essay on this subject. He considers proper dieting of the greatest importance and has little faith in drugs. The diet should consist of fat and proteid. Saccharine is an excellent substitute for sugar and may be given with impunity for years, while dulcin (sucrol) is more liable to have disagreeable after-effects. The author has not, as yet, found a perfect substitute for bread; those which have been tried either become repulsive to the taste in time or they are too rich in carbohydrate. He prefers Graham bread, if the conditions permit of bread at all. The patients should take copious meals to make up for the loss in flesh that goes with the disease. Forbidden articles of diet should be withdrawn gradually, not suddenly. If the urine remains free from sugar for several weeks, a little bread — say about 1 oz. — may be permitted, and the amount increased by about ¼ oz. until 3 oz. are reached, which is ordinarily enough to get along with. However, as soon as sugar reappears in the urine, the intake of bread must be diminished or wholly withdrawn again. Aside from the diabetic regime, attention should be paid to clothing, cleanliness and exercise. It is known that diabetics are very sensitive to changes in temperature and the weather, so that it is important to advise wearing suitable underwear, even in summer. Finally, all mental excitement should be avoided.—*Phila. Med. Journal*, Jan. 10, 1903.

Biliary Colic.—The treatment of biliary colic is morphine hypodermically, or inhalations of chloroform. Hot fomentations to the liver often give relief. Laxatives and large quantities of alkaline mineral waters should be given. The diet should exclude, as far as possible, starchy and saccharine foods. The sulphate or phosphate of sodium is supposed to prevent the formation of gall-stones. Dose is one or two teaspoonfuls in water daily.

For the intense itching, comfort powder, strong alkaline baths (hot), or antipyrin (gr. viii) may be tried.

Repeated attacks of colic, the presence of a distended gall-bladder, associated with pain or with fever, or the evidence of intestinal obstruction due to gall-stone impaction calls for surgical interference.

The use of olive oil in the cure or prevention of gall-stones has no real foundation. Its use is due to the fact that, when it is taken in large quantities, concretions of fat appear in the stools, and these have been mistaken for gall-stones. The use of oil does not reduce the size of gall-stones, nor help to dissolve them.—*The Trained Nurse*, January, 1902.

Book Notices.

A Text-Book of the Diseases of the Ear, for Students and Practitioners. By Prof. Dr. ADAM POLITZER, of Vienna. Translated at the Personal Request of the Author and Edited by Milton J. Ballin, Ph B., M.D., and Clarence L. Heller, M.D. Fourth Edition, Revised and Enlarged, with 346 Original Illustrations. Lea Brothers & Co., Philadelphia and New York, 1903.

No one will deny Prof. Politzer the right to the title of *the* master of otology. Therefore, one cannot fail to agree with the statements of the translators that "the free and masterly manner in which the author, in all his previous publications, discussed the various diseases of the ear, the thoroughness with which he treated aural surgery, the position which he holds among otologists, and his numerous original investigations, which, from the basis of otology, are all sufficient guarantee for the excellence of any work bearing his name." This edition is without doubt the peer of all that have preceded it, and shows on the part of the editors an amount of care, labor, thoroughness and attention to detail which will be appreciated by those interested in the subject. The translation is free and true to the German text, and the arrangement of the less important portions of the work in small type is wise and valuable for ready reference. The illustrations are abundant and models of their kind. Every possible phase of the subject has been covered; suppuration of the middle ear and mastoid involvement, with its sequelæ, have been enlarged upon and presented in a forcible way. The editors have added an appendix of the combinations most frequently used at Prof. Politzer's clinic. All in all, it may be said that the translation has been conducted in a manner deserving of the commendation of the author when he says "the book does not read like a translation, but more like an original work." The present revision places the subject matter entirely up to date and gives to the American and English profession a classic in otology.

SELECTED PRESCRIPTIONS.

RHEUMATISM IN CHILDREN.—

℞ Sodii salicylatis ..... ʒ i
Liq. potassii citratis..... ℥ ij
Tinct. cardamomi comp. . . ..ad ℥ iii

M. Sig. Two teaspoonfuls every two hours for a child of 5 years. —W. M. POWELL.

BRONCHITIS IN CHILDREN.—

℞ Syrupi ipecacuanhae,
Spiritus aetheris nitrosi ....āā ʒ ij
Olei ricini ..... ʒ iij
Syrupi Tolutani.....q. s. ℥ ij

M. Sig. ʒi q. 3 h. —J. L. SMITH.

PERTUSSIS.—

℞ Pulv. bellad. rad. .....gr. ⅛
Pulv. Doveri .....gr. ss
Sulph. sublim.,
Sacch. alb. .....āā gr. viij

M. Sig. One dose—give two to ten times daily.
—*Southern Practitioner.*

HAIR TONIC.—

℞ Betanaphthol ..... ʒ ss
Olei ricini ..... ʒ iss
Olei olivae ..... ʒ ij
Spiritus vini rectificati ..... ℥ iiss
Olei aurantii florum..... ♏ ij

M. Sig. Apply daily. —ALLEN.

BRONCHITIS.—

℞ Camphorae.....gr. i
Ext. bellad. .....gr. ss
Quininae sulphatis .....gr. i to ij
Morph. sulphatis .....gr. ¼

M., ft. pil. No. i. Sig. One every half hour for four doses, then one every three hours.
—MUSSER.

CONSTIPATION OF PREGNANCY.—

℞ Ext. colocynth. comp .....gr. iij
Ext. hyoscyami .....gr. i
Ext. nucis vomicae .....gr. ¼

M., ft. pil. No. i. Sig. One pill two or three times daily. —PLAYFAIR.

PULMONARY EMPHYSEMA.—

℞ Extr. Quebracho..... 5,0
Aquæ fortis. 180,0
Syrupi Althææ..... 20,0

M. Sig. Tablespoonful every three hours.
—NEUSSER.

EPHEMERAL FEVER.—

℞ Spiritus ætheris..... ʒ ss
Potassii acetatis..... ʒ ij
Spiritus Mindereri..... .....
Aquæ camphoræ..... āā ℥ iij
Syr. simplicis..... ʒ ij

M. Sig. For adults a tablespoonful, for children a teaspoonful every two hours.
—THE PRACTITIONERS' MANUAL.

The American Therapist.

A MONTHLY RECORD OF MODERN THERAPEUTICS,

WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

VOL. XI. NEW YORK, MAY 15, 1903. No. 11.

Original Articles.

TREATMENT OF ACNE VULGARIS.

By VICTOR STEINBERGER, M.D.,
Assistant Dermatologist in the Outdoor Department of Mt. Sinai Hospital.

This affection does not receive the attention from many general practitioners that it deserves; the patients merely receiving a prescription for some local remedy, at the same time being told that it is nothing and that it will disappear in time. These physicians do not at the time consider that the affection is unsightly to those seeking relief, to their relatives and to their friends, and that much can be done to prevent the pitting and scarring which so often result from a neglected acne.

Before the physician can successfully treat acne, he must fully understand the etiology in each case and treat that cause at the same time he treats the local condition. I shall therefore not apologize for stating briefly some of the well-known causes of acne. We must also bear in mind that acne is primarily due to the retention of sebaceous glands and occurs chiefly at a time when these sebaceous glands are most active, requiring good blood and nerve supply, and that anything tending to interfere with that supply will act as a predisposing cause. The cause may be

1) Local, such as heat, cold, want of cleanliness, employment in hot and dusty atmosphere, use of cosmetics causing congestion in the glands, etc.

2) General or systemic, such as constipation, anemia, general debility, disorders of the stomach, intestines, uterus, etc.

Any of the above causes can produce congestion, which either interferes with the secretion of sebum, or blocks up the mouth of the duct and thus prevents the excretion of the sebum, giving rise to decomposition of retained products.

The treatment of the local condition, without attention to the cause, will be of no benefit. Personal hygiene and cleanliness must be carefully looked after. Working in dusty rooms is advised against. Most cosmetics contain some irritant, which produces congestion, or are liable to block up the mouths of the ducts, thus interfering with the proper functions of those glands, and must therefore be interdicted. The skin must be kept clean, avoiding all soaps or local applications containing irritants. People with oily skins, whose glands secrete profusely, are most liable to be subject to acne.

Of systemic causes, constipation is by far the most frequent. This can, in most instances, the subjects being young, be successfully overcome by attention to diet, also advising systematic exercise, especially outdoors; also, cold baths in the form of douches to the spine. These methods are particularly appropriate for the relief of constipation in those leading a sedentary life. The habit of having a movement at a certain time of the day, usually after breakfast, can be cultivated, in some cases easily, in others only after much effort and patience. Drinking plenty of water is often of decided benefit. If resort to drugs must be occasionally had, then we may prescribe small repeated doses of calomel, Carlsbad salts, or cascara for a few days. If any of the other systemic disorders be found as the cause, it must be treated accordingly.

In treating the local condition we must remember that we have two objects in view: 1) Removal of sebaceous material in comedones; 2) Relief of inflammation and absorption of infiltration.

For the removal of sebum, various instruments known as comedo extractors have been recommended; but the same can be accomplished by pressure of two fingers, one on each side of the sebaceous plug, the fingers being prevented from slipping by covering them with a piece of linen or muslin.

For the absorption of infiltration innumerable remedies have been recommended; but no one remedy will answer for all cases. For we must consider whether the skin requires a soothing or a stimulating application. In most cases we find stimulating applications more desirable, but before resorting to these, the comedones ought to be expressed. Piercing the papules and pustules with an acne lance or a sharp-pointed bistoury is of benefit in aiding the expulsion of sebaceous material and relieving the engorged blood-vessels. In acne indurata it may be found necessary to use the dermal curette, with which the skin is scraped. This may be used in most cases with advantage.

As most cases require stimulation locally, I advise washing the face thoroughly with hot water twice each day. Or when the condition warrants it, tincture of green soap rubbed well into the skin and then washed with hot water. After either of the above procedures, the comedones can be more easily expressed. Massage will benefit the affection in most cases, the massage consisting of repeated pinching of that portion of the skin where the affection exists between the thumb and index finger of either hand. I have also observed that exposure to the sun improves this condition, due perhaps to the stimulation of its heat rays, while its chemical rays may also tend to act favorably on the lesions.

Local applications in the form of lotions and salves are used. The lotions most used contain potassium sulphuratum with zinc sulphate, or bichloride of mercury. The latter is liable to produce a severe dermatitis; especially in those patients whose skins cannot bear even very weak applications of mercury without producing dermatitis. Touching the individual lesions with acid nitrate of mercury, and salves containing sulphur, mercury, ichthyol, salicylic acid, chrysophanic acid, B-naphthol, etc., have all been used with advantage. I find, however, that very few chemicals are necessary locally. In fact, with three or four prescriptions for local remedies, one can accomplish as good results as with many. Those with which I have attained good results in the dispensary, and which I use also in private practice, are:

(a) ℞ Flor. sulphur..... 10.0
Resorcin..... 5.0
Petrolat.....100.0
M. Sig. Apply locally twice a day.

(b) Tincture of green soap rubbed well into the skin at night, before retiring, and washed off the next morning, is also a good stimulant.

(c) ℞ Zinci sulphat..... 8.0
Aquæ.....60.0
Potass. sulphurat..... 8.0
Aquæ.....60.0
M. et adde Lac sulphuris.....12.0
M. Sig. Apply locally four or five times a day.

When more decided stimulation is required, I use

(d) ℞ B naphthol..... 5.0 or 10.0
Sulphuris..... 45.0
Adipis..... 24.0
Sapon. virid. ad.....100.0

When any of the above produces dermatitis the same can be easily relieved by using

(e) ℞ Adip. benzoinat.
Lanolin
Aquæ calcis ãã part. æqu.
M. Sig. Apply two or three times a day, at the same time prohibiting the use of hot water on the face, or any other local application, until the irritation is relieved.

Internally, calcium sulphide has been recommended, especially in pustular acne. I have used this in only one case, but with no benefit to the patient.

For some years potassium iodide in five-grain doses three times a day has

been recommended by some physicians. Whether the benefit said to be derived from this is due to its aid in hastening absorption of infiltration, or to the homeopathic principle of *similia similibus curantur*, I don't know, but I have never seen any improvement from its use.

For quite some time I have been in the habit of advising yeast and have certainly seen marked improvement after its use in cases which previously did not respond favorably to other constitutional and local remedies. Brewers' yeast has been used advantageously in furunculosis and other suppurative processes of the skin, as non-parasitic sycosis. I therefore deemed it worthy of a trial in acne vulgaris. Where fresh brewers' yeast is obtainable I prefer it, but in many of my cases this could not be obtained and I resorted to the use of Fleischmann's compressed yeast, which is put on the market wrapped in tinfoil and can be bought in any grocery store.

Of brewers' yeast the patient takes one teaspoonful three times a day after meals, and the dose can be gradually increased if the patient can stand it. There is no diarrhea until one tablespoonful three times a day is taken. It may be taken in beer, which makes it more palatable.

When compressed yeast is ordered, I advise cutting one cake into six equal parts, one of which is taken by the patient three times a day after meals. This dose may be gradually increased until the patient takes one-quarter and even one-half a cake three times a day.

I have neither read nor heard of compressed yeast being used in acne or non-parasitic sycosis, for which affection I have for the last three weeks a patient under treatment who is using compressed yeast, as a result of which his sycosis is improving rapidly. The patient takes one-quarter of a cake three times a day, and had been under treatment by another physician previously for four months with no apparent improvement.

I shall now briefly narrate, omitting details, the history of three patients, in whom the improvement no doubt was due to the administration of compressed yeast as above described.

Case I. Miss B., age 16, occupation seamstress, well nourished, applied for treatment at Mt. Sinai Dispensary, June, 1899. Although treated for four months for her constipation, which was the only discoverable cause, and locally, very little improvement was noticed. Patient did not again appear for treatment until March, 1903, when her acne was much worse than it had been in 1899. Besides the same constitutional and local remedies that she formerly used, I ordered yeast, which she obtained in the compressed form, of which she takes one-sixth of a cake three times a day. Although under treatment only two months, Dr. Herman Goldenberg, in whose department the patient is treated, admits the remarkable improvement, and the patient says her face is in better condition than it has been for five years.

Case II. Miss R., age 15, well developed, general health fair, occupation seamstress. No discoverable cause. Applied for treatment at Mount Sinai Dispensary, March 1900, for comedones and acne, which consisted of papules and pustules. Although the above local remedies were used, and internally tonics administered, there was no noticeable improvement, although the patient had been under the said treatment almost constantly, until January 1903, when I advised the use of yeast which she obtained in the compressed form. The patient is now very well satisfied, her acne being in much better condition than it had been during any time of treatment. While taking the yeast, the local remedies were not used so energetically, the patient using, besides hot water for washing, mild sulphur salve.

Both the above patients are still under treatment.

Case III. Mr. D. R., age 22. Strong, well nourished, no discoverable cause, consulted me January 1902 for treatment

for acne and comedones, with which he had been afflicted for five years, during most of which time he was treated by physicians in Southbridge, Mass., where he resides. The acne consisted chiefly of pustules which I lanced, and as the patient was not a resident of this city and could not therefore remain under my supervision, I advised him to do the same when any pustules developed. Comedones were expressed as rapidly as they formed. Locally only tincture of green soap was used, which was followed by prescription "e," when skin became irritated. Internally nothing but one-sixth of a cake of compressed yeast three times a day.

March 24, 1902, I received a letter from him in which he states that his skin was in such good condition that he considered himself cured.

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RECENT PROGRESS IN CUTANEOUS THERAPY.

By Charles W. Allen, M. D.,

Professor of Dermatology in the New York Post-Graduate Medical School, etc., etc,

While progress in the treatment of skin affections cannot be said to keep pace with the new discoveries in the realms of histology, bacteriology, and etiology, still improvements are made now and then in the manner of treating some of the numerous dermatological conditions which confront us. In the vegetable parasitic conditions of the scalp and body, it has been found that the iodine preparations are of decided advantage, and in Lugol's solution, which I apply as a test stain in obscure or atypical cases of tinea versicolor and tinea circinata, we have, coincidentally, one of the most effective modes of treatment. Formalin is one of the newer drugs which has proven of value in the dermatomycoses. It may be employed in a 1 per cent. solution as a general wash for the scalp, and from this, up to the full strength of 40 per cent. Formalin may be applied best by the physician himself and to limited areas only. It must be remembered that the strongest applications for trichophytosis cruris, or capitis, etc., are very painful. In eczema there are some newer plans of treatment which are worthy of note. I have believed for years past that in weak solutions of methylene blue we possessed one of the most efficacious and at the same time agreeable applications for acute forms as well as for intertrigos, especially in infancy. The chief drawback to the free and extensive use of this remedy is its staining properties and its color. I believe that I was the first, in this country at least, to use and advocate its use in dermatological practice, and it is gratifying to me to find that, although so far as I am aware it has not been adopted to any great extent by the dermatologists in this country, Brocq, of Paris, is using and praising it.

In the intertrigenous eczemas of childhood, Leistikow advocates pyrogallol in 2 per cent. strength, and from this, down to ½ per cent. in acute stages. The danger of absorption, when large surfaces are covered, must not be overlooked.

Lanigallol is a new remedy recommended by Kromeyer and Gruenberg. It is said to be a triacetate of pyrogallol, but, unlike the latter, does not produce any ill effect upon healthy tissues. It is especially useful in the inveterate eczemas resembling psoriasis, when used in strength of from 5 to 20 per cent. The drug is said to split up slowly into its component parts, and the pyrogallol, or, as it is sometimes called, pyrogallic acid, is set free to exercise its cauterant action upon the tissues.

Radiotherapy is by far the most important method of treatment in dermatology, which has come up in many years, and perhaps that has ever come, especially if we include cancerous affections. Whilst still in a very infantile stage of its existence, treatment by the Roentgen ray has seemed to surpass that by the Finsen or other form of phototherapy. Litera-

ture already abounds with reports of cures of lupus, epithelioma, lupus erythematosus, favus, sycosis, inveterate psoriasis, chronic and obstinate eczemas, and in fact, a great variety of parasitic and non-parasitic affections. I have personally verified the beneficial influence of the X-rays in many of these conditions and have tried it in others in which I have not seen its former trial mentioned. In some of these conditions it shows an effect, and in others, none. It is in cutaneous cancer, more particularly than elsewhere perhaps, that its beneficial influence has been marked.

While its action is real, it is slow and, within certain limits, uncertain. I have preferred, therefore, to use the ray in conjunction with electrolysis and other measures, as the arsenical paste which I devised in 1898, or early in 1899, consisting of equal parts by weight of arsenious acid and methyl-para-amido-meta-oxybenzoate. The advantages of this over the Maarsden paste, made with acacia, is that the analgesic action of the methyl-para-amido-meta-oxybenzoate is exerted *pari passu* with that of the caustic, so that the necrosis is produced with the minimum of pain, and at times without any pain at all. I have discharged as well, as far as we are warranted in speaking of cure in cancer, a round dozen in whom this combined X-ray and paste or electrolytic treatment has been all that one could desire. I have at the present time under treatment another dozen or more cases, for the most part inoperable and some almost hopeless, and in these I may say there is not one but has shown the beneficial effect of the rays, while one of the severer forms has been discharged apparently cured.

30 East 33d Street, New York City.

For ringworm of the scalp or beard, Jackson speaks very highly of an ointment composed of a drachm of iodine crystals to an ounce of good goose-grease.

*METHODS WHICH RENDER SOME THERAPEUTIC AGENTS MORE PALATABLE.**

By SAMUEL E. EARP, M,.S. M.D., Indianapolis,
Consultant in practice of medicine to the Indianapolis City Hospital, St. Vincent's Hospital, Union State Hospital, and Indianapolis City Dispensary; Lecturer on Medicine and Dietetics, St. Vincent's Training School for Nurses.

A knowledge of the physiological and therapeutical action of a remedial agent is necessary in order to obtain good results; but there is one more thing needful, and that is to render it palatable so far as possible. The appearance and odor might also receive consideration; however, sometimes it is advisable to disguise the taste even at the expense of its attractive appearance. Of the two evils, choose the lesser one. If unpleasant medicine is made more inviting, it is an important factor in the management of the diseases of childhood and is also more acceptable to the adult.

To give castor oil or cod liver oil in coffee or milk creates a prejudice against these beverages, and the taste of the oil is still prominent. Whiskey and glycerin, given with each dose, may partly answer the purpose, or either one separately; however, some object to the whiskey for moral reasons.

To give castor oil in one dose as a purgative, probably the "castor oil sandwich" is the best method. It is made as follows: In the bottom of a glass put a small quantity of glycerin, then the oil, lastly half an ounce of sherry wine, and take at one draught. This will also apply to the single dose of cod liver oil.

In case either agent is dispensed in quantities, an emulsion in which the flavor of cinnamon or gaultheria predominates generally serves the purpose.

Perhaps every one is familiar with the story of the young woman who asked a soda fountain clerk to prepare a dose of castor oil for her and also a glass of soda, and when she was informed later that she

* Reprinted from *The N. Y. Medical Journal*, April 11, 1903.

had drank the oil with the soda, replied, "but the oil was for my sister." While the soda in this instance acted well, so also will it answer as a vehicle for Epsom salts, but the ordinary "soda pop" is better.

The attempts to disguise quinine have generally been only partially successful. Chocolate, yerba santa, and licorice in the form of a heavy syrup may be used, but I think the most preferable to be one grain of tannic acid to each three grains of quinine in a vehicle of syrup of tolu. The iodide and bromide of potassium and salicylic acid may be given in milk, which also prevents gastric irritation. However, some prefer in the case of iodine derivatives to use the iodated starch or the liquor iodi compositus.

In case copaiba and turpentine are not used in gelatin capsule form, an emulsion flavored with gaultheria comes next in order.

For chloral hydrate I think peppermint water superior to cinnamon. Equal parts of peppermint water and simple syrup make the best solution for salicylate of sodium. Unless there is an objection to the intensely sweet taste, the syrup of glycyrrhiza answers best for sodium salicylate.

If the mouth is flushed quickly with a small quantity of whiskey, the medicinal oils may be taken immediately afterward, and the disagreeable taste is not so perceptible.

A few grains of table salt taken upon the tongue will produce a copious flow of saliva, and then if swallowed with medicine which has an objectionable taste it may in a measure be disguised. Care should be taken, however, that no chemical incompatibility exists.

If lemon ice is held in the mouth for a moment only, then a teaspoonful of a preparation which would otherwise seem nauseous may be taken with very little unpleasant effect. In the last instance it is understood that both the medicine and the ice are swallowed at the same time.

Quite frequently medicine is taken into the mouth when the secretions are inactive, and therefore the membranes parched and dry, thus giving an opportunity for the bitter principles to remain in contact with the tongue and create an immediate unpleasant taste, but more especially an after-taste.

Sometimes simply a drink of water will obviate this condition, or perhaps a lump of ice held in the mouth, or water acidulated with dilute phosphoric acid, to be taken before the medicine. A combination of syrup of red raspberry and glycerin makes an unusually palatable vehicle.

At a time when salicylate of sodium was unknown, it was very popular to combine sodium bicarbonate with salicylic acid, and the last mentioned menstruum is considered the best for this combination. In fact, I might include its use for the administration of sodium salicylate.

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*ENURESIS.**

By F. H. Darby, M.D., Columbus, O.

In addition to the crippled, heretofore discussed before this body, we have in our public institutions for children many pitiable cases of incontinence of urine. They are so numerous in some instances as to suggest the idea of an epidemic.

We account largely for the prevalence of this trouble by the fact that these children belong to a class who are left after the healthy and more desirable children are picked out. In contrast with "the survival of the fittest," they might be called "the unwanted residuum."

Crowded together, frequently in unsanitary quarters, mutually sniffing uriniferous odor, until the trouble becomes in many subjects a fixed habit, if not a positive epidemic. These little pent-up unfortunates are worse off than their brothers and sisters in private life, where at best the ailment depends on a great diversity of pathologic conditions. With this culled

*Reprinted from *The Cincinnati Lancet-Clinic*, March 28, 1903.

over and defective class, there is, relatively, a greater number of diseases producing this symptom. Speaking of it in this light, you know that it has been well said, a half century ago, that incontinence of urine is only a symptom, and may arise from many causes.

All the light of modern research has tended not only to confirm these old views, but to bring out and multiply new causes for this symptom. Since the malady is a mere symptom, our only hope is that of a rational treatment. Therapeutists, however zealous, cannot reasonably expect that any one single remedy or combination of remedies will cure all cases. The claims of empirics for their particular drops, capsules or tablets *ad nauseam* have no place in public confidence.

The hope of these little ones for relief is, first, in the wisdom of their custodians, a wisdom that shall direct that the policy of segregation rather than that of aggregation may be adopted in their behalf. A vantage-point is gained when they are separated one from another. To get out and away from the noisome odors of the enurectic ward into any other environment would be a relief, physically, mentally, and morally. Mind plays a great part in these cases, much more than has been recognized in the past, as the remote past had much more to do with the anatomy of the child as a good subject for the rod in such cases.

Of the mechanism of this complaint, we may say that it is due either to the contraction of the longitudinal muscular layer of the bladder or to the relaxation of the sphincters.

This unconscious voiding of urine may be the result of all conditions which annul or interrupt the ordinary and normal voluntary control exercised by the brain over the act of micturition.

These conditions may pertain (1) to the brain itself; or (2) to that portion of the spinal cord which puts the brain in connection with the vesical centres.

The conditions that annul conscious cerebral activity are: All forms of coma, idiocy, and some varieties of insanity, sunstroke, epilepsy, shock, and poisons of certain infectious fevers.

Lesions of the spinal cord interfering with the normal act of micturition are: Injuries and tumors of the cord, hemorrhages into the cord, transverse myelitis, spinal meningitis, and tabes dorsalis.

Enuresis of the nocturnal type may be due to an increased reflex excitability of the nervous mechanism. Under such circumstances, and especially if an unusual irritation is present, the urine is voided involuntarily during sleep, when the cerebral control is in abeyance. It may occur in the daytime when the mind is engrossed. The causes of the local irritation may be looked for in the presence of ascarides, elongated prepuce, contraction of the urethral meatus, or masturbation. Bierhoff is of the opinion that the essential or ultimate condition is hyperesthesia of the deep urethra or sphincter from hyperemia or inflammation. Fitz says: "Nocturnal incontinence may be a manifestation of nocturnal epilepsy or of incipient spinal disease."

The sources of direct irritation are: pyelitis, renal tumors, renal calculi, hyperacidity of the urine incidental to lithemia, etc. The child is usually weak and shows some signs of malnutrition. The exact cause is not easy of determination, but may be traced in most instances to some derangement of the mechanism of the spinal cord.

Enuresis is most common between the ages of three and twelve years, and appears to be found more frequently affecting the male.

In the diagnosis of these cases care must be taken to separate those of nervous origin from those due to purely local causes. The rectum must be examined for ascarides or for hemorrhoids. The urine must be also examined chemically; calculi should be sought for. Digestive disturbances may be found to be present.

After having determined the cause, we come to consider the treatment. As above intimated, the first important measure for the cure of these little sufferers is not scolding or whipping, but to secure the best sanitary conditions for them; an important measure in this direction is removal from the institution—a very laudable place for fresh-air advocates and child-placing agents to vent their enthusiasm and expend their surplus funds. Many families who would not on any account agree to take a child permanently, will, as a Christian duty, cheerfully give them a temporary home. This temporary residence should be closely followed up and its beneficial effects clinched by the most appropriate and well-directed therapeutic measures.

The therapy, as you well know, is as varied as are the conditions producing the symptom. In those cases due to debility and malnutrition, tonics, iron, strychnine, cod-liver oil, and plenty of outdoor exercise will effect a cure. In hyperesthesia of the vesical neck, tincture cantharides in minute doses is indicated. In choreic cases, antispasmodics, arsenic, cod-liver oil, quinine, iron and cold bathing. A good plan is to give syr. ferri iodidi, five minims to twenty, in water before meals, to be followed by liquor potassæ et arsenitis, minims three to six, according to the tolerance of the patient. Five grains of quinine gradually increased is also worth a trial. The time-honored practice of waking the child for voluntary vesical evacuation at a late adult bedtime, and an hour or two before early rising, must not be despised nor forgotten.

Elevation of the hips and mechanical means to prevent the dorsal decubitus will be efforts in the right direction.

Time and space prelude even an allusion to the many other good things well known to you. We will, however, append one or two formulas in which the old "sheet anchor," belladonna, will be recognized:

Ext. jaborandi } āā.....fl. drachms i
Ext. belladonnæ }
Ext. tritica repentis.....fl. ounces ss
Ext. ergota } āā.....fl. ounces i
Ext. rhus aromatica }
Aquæ .....ounces ss
M. et Sig.: One teaspoonful three times a day.

(S. W. Armitage, in *Journal American Medical Association*, p. 173, July 15, 1899.)

Ext. rhus aromat..... .fl. drachms ijss
Ext. ergota.....fl. ounces ss
Ext. belladonnæ.....fl. drachms ss
Strych. sulph..... .....gr. ¼
Syr. aurantii cort..... ad ounces iv
M. et Sig.: One teaspoonful four times a day.

(McAllister, in *Journal American Medical Association*, p. 173, July 15, 1899.)

In the administration of belladonna, two important things must be observed: (1) that the drug is a good sample; (2) that it is to be pushed to the full tolerance of the patient.

Gall Stones.—

℞ Aether sulph. ..... ʒ iij
Olei therebinth..... ʒ ij
M. Sig. Ten drops in capsules *t. i. d. p. c.*

—M. A. B. Smith.

Sulphur in Typhoid Fever.—Woroschilsky, of Odessa (*Ther. Monatsh.*, XVI, No. 11), has used washed sulphur in a series of cases of typhoid fever, sometimes beginning its employment at the onset of the disease, at others in the end of the first week, and in some cases even during the second and third weeks. To adults he gave 1.25 gm. (19 grs.) every 2 hours, that is, up to 10 gm. (2½ dr.) daily; to children, 0.3 to 0.5 gm. (4½ to 7½ grs.) two-hourly and up to 4 gm. (1 dr.) per day. The remedy was regularly well borne, even daily quantities of 12 gm. (3 dr.) not producing diarrhea; diarrhea, if present, was lessened, and the entire disease became milder in character. Although the effects of the medicament are attributed chiefly to its direct action on the diseased mucous membrane, the author has found the drug of benefit in cases in which, with slight local lesions, the constitutional manifestations were serious. Of course, all the general and dietetic rules of treatment were carried out.—*Phila. Medical Journal*, February 14, 1903.

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Editorial.

A TIMELY ACT.

In our March number we took occasion to speak of self-medication and substitution, and to sound a note of warning against these dangerous practices with their deplorable consequences. We were outspoken in our belief that half hearted measures would prove inadequate to remedy the evil and expressed the hope that legislation would be enacted which would deal rigidly with the offenders of substitution. It is, therefore, with a sense of deep satisfaction that we learn of the passage by the Senate of the Bostwick-Dowling bill, which is aimed plainly and directly in the right direction and which in effect reads as follows:

"Any person, who, in putting up any drug, medicine, or food, or preparation used in medical practice, or making up any prescription, or filling any order for, or selling any such drug, medicine, food, or preparation, omits to label the same, or puts any untrue label, stamp or other designation of contents upon any box, bottle, or other package containing a drug, medicine, food, or preparation used in medical practice, or substitutes or dispenses a different article for or in lieu of any article prescribed, ordered, required or demanded, or puts up a greater or less quantity of any ingredient specified in any such prescription, order, requirement or demand, than that prescribed, ordered, required or demanded, or otherwise deviates from the terms of the prescription, order, requirement or demand, is guilty of a misdemeanor; provided, however, that, except in the case of physicians' prescriptions, nothing herein contained shall be deemed or construed to prevent or impair or in any manner affect the right of an apothecary, druggist, pharmacist, or other person to recommend the purchase of an article other than that ordered, required or demanded, but of a similar nature, or to sell such other article in place or in lieu of an article ordered, required or demanded, with the knowledge and consent of the purchaser. Upon a second conviction of a violation of this section the offender must be sentenced to imprisonment for a term of not less than ten days nor more than one year, and to the payment of a fine of not less than ten dollars nor more than five hundred dollars. The third conviction of a violation of any of the provisions of this section, in addition to rendering the offender liable to the penalty prescribed by law for a misdemeanor, shall forfeit any right which he may possess under the law of this State at the time of such conviction, to engage as proprietor, agent, employee or otherwise, in the business of an apothecary, pharmacist or druggist, or to compound, prepare or dispense prescriptions or orders for drugs, medicines, or foods, or preparations used in medical practice; and the offender shall be by reason of such conviction disqualified from engaging in any such business as proprietor, agent, employee or otherwise, or compounding, preparing or dispensing medical prescriptions or orders for drugs, medicines, or foods, or preparations used in medical practice."

It is safe to say that the Governor will make this bill a law, and thus have the druggist give to the physician's prescription the care, consideration, and sacredness to which it is entitled. With *The Medical Record* we say that "other States should pattern after New York and enact similar legislation."

WITHIN RECENT DATE many newer preparations for the treatment of dermatological affections have reached us, and of these some have been found to possess decided advantages over the older ones. In a short paper on "Recent Progress in Cutaneous Therapy," Prof. CHARLES W. ALLEN outlines his personal experience and views in regard to some obstinate and inveterate cutaneous lesions, giving those drugs and methods which he has found most efficacious. His iodine test, for corroborating the diagnosis of parasitic skin diseases and for bringing into relief pale and obscure lesions of tinea versicolor, is of great practical value and very useful for class-room demonstration. Prof. ALLEN has for a long time advocated the local application of methylene blue for acute eczematous and intertrigenous

conditions, and yet despite its beneficial action the method has not gained ground. From a somewhat extended experience with the local application of this drug the writer can recommend it most highly.

Roentgen therapy has been applied by Prof. ALLEN to a varied series of cutaneous conditions and his opinions may be considered authoritative. We are pleased to have the opportunity of presenting this article to our readers and to suggest a careful trial of these therapeutic procedures.

ACNE VULGARIS has always been considered by dermatologists as one of the most trying affections to cure. A glance at the various text-books on skin diseases will convince the reader that the number of remedies recommended is so great as to safely assert that no one in particular is useful. The disease appears in so many forms that, unless careful consideration is given to the exact indications for interference, little good will be accomplished. In this issue Dr. VICTOR STEINBERGER has written a very interesting article on the subject, treating it from its etiological and therapeutic standpoints. Much practical information is contained therein and many useful formulæ are given. The doctor's experience, that "exposure to the sun improves this condition," is highly interesting in these days of Finsen and X-ray therapy. His remarkable success with yeast in three instances warrants a trial in cases which have successfully resisted other means.

ENURESIS IS A SUBJECT which will interest every general practitioner both on account of its frequency and because of the various drugs and measures which must be resorted to for its relief. We reprint a very practical and concise paper on this subject by DR. F. H. DARBY, who deals with the malady from its etiological and therapeutic standpoints. It is of course highly important to seek for the cause and if possible remove it; but the very cases which prove most obstinate are those in which a most careful search fails to reveal the presence of an underlying factor. A drug which in one case or series of cases acts like a charm will in a second series prove a most dismal failure. No definite treatment can be outlined and each case must be considered a law unto itself.

WE REPRINT IN THIS ISSUE an article by DR. S. E. EARP on "Methods which Render some Therapeutic Agents more Palatable," and urge a careful perusal of it. It has been stated on previous occasions that our aim should always be to render combinations of drugs agreeable to the sight, taste and smell, and so enhance the possible therapeutic action, if only by suggestion.

This practical article is one which can be put into daily practice, and if carefully followed will make for physicians many friends, more particularly among children.

THERAPEUTIC NOTES.

Two to three drops of a five per cent. glycerine solution of formalin have been found of benefit in purulent otitis media (Geronzi).

The local application of eucalyptus oil is said to afford rapid relief of pain in chilblains.

Gallois has found peroxide of hydrogen valuable not only for bleaching the hair but for the hypertrichosis as well.

The local application of a thirty per cent. solution of lactic acid is recommended by Balzer for alopecia.

Randall considers nitroglycerin a valuable remedy for relieving muscular spasms.

For incontinence of the urine Balfour uses boric acid and salol in combination to render the urine aseptic.

In the administration of quinine, reflex irritability of the stomach may be relieved by the combined use of pepsin, bromides, or dilute hydrobromic acid.

Leven advises turpentine as a local application in ringworm and tinea versicolor.

For the night-sweats of phthisis Cohen uses a ten per cent. solution of formalin soap rubbed into the body for one minute every evening before retiring.

Ten to twenty drops of aromatic sulphuric acid, taken in chamomile-tea before retiring, is said to arrest profuse respiration.

For offensive breath a drachm of Labarraque's solution to six ounces of peppermint water, used as a gargle, is recommended by *The Practitioner*.

The ulcerations following vaccination may be successfully treated with powdered subiodide of bismuth.

Vomiting of indigestion in children is in most cases promptly controlled by the administration of one-tenth to one-twelfth grain of calomel every fifteen minutes.

Fifteen grains of pyrogallic acid to an ounce of collodion will sometimes cure ringworm very speedily.

Buttermilk, which contains a low percentage of fat, with high proteids, sugar and acidity, has been recommended for acute and chronic gastro-enteritis.

One drachm of carbolic acid to the pint of water is recommended by Brodnax for mercurial stomatitis.

Falkner speaks very highly of dermatol as a remedy for the various forms of diarrhea.

One drop of chloroform on sugar three times daily is said to be a good prophylactic against jaundice and biliary colic.

Current Literature.

SEDATIVE EXPECTORANTS.—Robert Ingram (*The Cincinnati Lancet Clinic*, January 31, 1903), in an article on expectorants, says: *Ipecac* is the safest and most useful, although the least powerful of all the nauseating expectorants. It is the only one that can be freely given to children. It is indicated in the early stages of all acute inflammatory conditions of the respiratory mucous membrane.

Antimony, usually in the form of the wine, is much more powerful than ipecac as a sedative and nauseant, and must be used with more care. It is one of the most efficient of all the sedative expectorants, and affords in cases of urgency a very efficacious, although a very disagreeable, method of putting an end to an attack of acute bronchitis. Antimony is a very powerful remedy, and is especially injurious to young children or the debilitated, in whom it is very liable to cause collapse. It is contra-indicated where gastro-intestinal inflammation exists.

Apomorphine exerts a very powerful influence in inflammatory affections of the air passages, quite similar to antimony. After its administration, the sputum becomes freer and thinner, and expectoration is greatly aided. When there is a dry, hacking cough, little expectoration, some disposition to spasm of the bronchial tubes, this drug finds its sphere of greatest usefulness. It is quite an active remedy, and great care should be exercised in its exhibition in debilitated subjects and in children. The minimum dose should be given and repeated at intervals of a few hours until the desired result is obtained.

Iodides are classed by Brunton as sedative expectorants. They thin the bronchial secretion, promote expectoration, and at the same time aid in the absorption of the inflammatory products in the lungs, as they do elsewhere. They improve the nutrition of the bronchial mucous membrane. It is, perhaps, the best drug we

know in the treatment of chronic bronchial inflammations, especially where a spasmodic element exists. Some writers class iodides as alterative expectorants. Syrup of hydriodic acid is a great favorite with the essayist in the bronchitis of children and delicate patients, when a tonic is needed at will.

Treatment of Tonsilitis.—Walter Sands Mills (*Medical News*, January 24, 1903), in an article entitled "Tonsilitis classified as an Infectious Disease," remarks as follows:

As tonsilitis is undoubtedly contagious sometimes (all writers are agreed as to that), and as the majority of cases occur in children or young adults, the first thing to do on seeing a case is to isolate the patient. If a case is found in school, the patient should be sent home at once.

The patient should be put to bed and placed on a liquid diet. In the way of local treatment I use nothing but a gargle of cheap claret wine. This can be used every two or three hours, or oftener, as the patient wishes. The tannic acid in the claret acts as an astringent, and the throat of the tonsilitis patient usually feels much better after its use. I use a number of different drugs for tonsilitis, and I believe with benefit to my patients. I have never had a case of tonsilitis go on to suppuration (quinsy), although I have detailed records of fifty and have treated many others. I have seen a number of cases of quinsy that were just on the point of breaking down when they came to me for treatment. Moreover, I believe the tendency to occur has after a time been eradicated by the treatment which I shall outline.

Aconite in small doses, frequently repeated at the very onset of the disease, is often of service in simple tonsilitis. When the disease has progressed to the follicular stage aconite is no longer useful. By small doses frequently repeated I mean drop doses of a 10 per cent. solution every hour, given preferably in water. Osler recommends full doses of aconite, but in my experience the smaller doses are more satisfactory.

If the fever is very high, pulse full and bounding, face flushed, eyes red, and evidences of intense congestion of the throat are present, a one per cent. solution of belladonna is the best remedy. Bartholow gives good indications for this remedy in his "Materia Medica." He fails, however, to mention it in the list of remedies for tonsilitis in his "Practice."

In follicular tonsilitis the remedy *par excellence* is phytolacca. I use drop doses of a one per cent. solution every one or two hours, according to the severity of the case. Its action is almost specific. As noted above, I have never had a case go on to the suppuration. Bartholow speaks of phytolacca as a glandular remedy, especially as a specific in gathered breasts to prevent suppuration. I am able to endorse that most emphatically, and I can speak just as highly of it in follicular tonsilitis.

If suppuration has already begun when the case applies for treatment, nothing will clear it up so quickly as sulphide of calcium in $^1/_{100}$ grain doses.

Sore Throat. — B. F. Randolph Clark (*The Texas Medical News*, February, 1903) states that not every patient who complains of sore throat is actually suffering from angina. This phrase is loosely used to describe any pain or discomfort about the mouth, fauces, or larynx. There are very many causes which give rise to discomfort in the throat. Sometimes rheumatism of the muscles of deglutition causes much pain, while on examination only a slight redness of the posterior wall of the pharynx can be seen. There may be paralysis of the throat muscles which will cause discomfort in the throat. Inquiry in such cases should be made as to recent diphtheria. Sore throat with a generally diffused redness of the pharynx is characteristic of simple catarrhal pharyngitis. It yields readily to glycerole of tannic acid, which should be applied after the

surface has been cleansed with an alkaline spray. An initial dose of calomel and a gargle of chlorate of potash or rhus glabra are effective adjuvants. Hypertrophied tonsils may become inflamed and sore. Acute follicular tonsilitis is one of the most frequent causes of sore throat. The seat of the disease is in the crypts or follicles, and each one must be cleansed out with hydrogen dioxide, on cotton wound on a steel probe, and then wiped out with a strong solution of silver nitrate. The bowels should be opened and salicylates given internally. This treatment will always shorten, modify, and often abort the attack. Phlegmonous tonsilitis or quinsy is most distressing. If seen before pus is fully formed, scarification gives much relief. Hot liquids held in the mouth seem to give some relief and hasten the process. The bowels should be thoroughly opened. The writer mentions many other forms of sore throat, concluding with a few remarks on diphtheria. He declares that the early use of antitoxin, in some cases, without waiting for the results of the bacteriological examination, is imperative.

Antitetanus Serum.—Frederick A. Packard (*Am. Journ. of the Medical Sciences*, December, 1902) says: The results with this serum have been distinctly disappointing, and the reports are in little agreement. In Italy tetanus must be a very much milder disease or much more amenable to treatment than it is either in Germany or in the United States, for we find the Italians reporting mortalities of from 0 to 30 per cent., while in Germany and in this country the mortality ranges from 40 to 70 per cent. and over, with practically the same treatment. In Italy, Baccelli's carbolic acid treatment seems to give as good results as either Tizzoni's or Behring's sera. There are three ways of giving the antitetanus serum: The subcutaneous, the intra-cerebral, and the subarachnoid or spinal methods. On animals the intracerebral method has given some brilliant results. The statistics of tetanus mortality are gone into quite extensively and the authors conclude "that we have in tetanus antitoxine not a specific, because it has failed too often to have merited such a name, but a valuable remedy in the treatment of the disease, and one that cannot be neglected till a better is supplied." Unfortunately tetanus antitoxine deteriorates rapidly, and often seems inefficient at the start. Larger doses should be used than is ordinarily done, and they should be frequently repeated if the best results are to be hoped for, and as the serum itself is harmless the only objection to this is the expense.

Adrenalin in Hay Fever.—*The Medical Bulletin*, February, 1903, says:

There is increasing evidence that adrenalin fully meets the indications as a remedial agent in hay fever. It controls the nasal discharge, allays congestion of the mucous membranes, and in that manner reduces the swelling of the turbinal tissues. As the nasal obstruction disappears, natural breathing is materially aided, and the ungovernable desire to sneeze is mitigated. In short, a season of comparative comfort takes the place of the former condition of distress and unrest. Adrenalin blanches the mucous membrane by vigorously contracting the capillaries, and thus reduces local turgescence. It strengthens the heart and overcomes the sense of malaise, so frequently a prominent feature in cases of long standing.

In the treatment of hay fever the solution of adrenalin chloride should be used. This preparation is supplied in the strength of 1 part adrenalin chloride to 1,000 parts normal saline solution, and is preserved by the addition of 0.5 per cent. chloretone. The 1 to 1,000 solution should be diluted by the addition of 4 parts normal salt solution, and sprayed into the nares with a "cocaine" atomizer. In the office the 1 to 1,000 solution may be applied in full strength. A small pledget of cotton is wrapped about the end of an applicator and moistened with a few drops of the

solution (1 to 1,000). The speculum is then introduced, the patient's head is tilted backward, in a position most favorable for thorough illumination by the head-mirror, and the visible portions of the lower and middle turbinate bodies and the septum are carefully and thoroughly brushed. The same application is made to the other nostril, when usually relief follows in a few moments. Should the benefit prove only partial, the 1 to 5,000 solution may now be sprayed into both nares, and a few drops instilled into both eyes. The effect of this treatment may be expected to last for several hours. Indeed, some physicians report that it is necessary to make but one thorough application daily to afford complete relief.

It is also recommended that the solution of adrenalin chloride be administered internally in 5 to 10-drop doses, beginning ten days to two weeks prior to the expected attack. In explanation of the beneficial effect of the drug when used in this manner, the suggestion has been made that hay fever is essentially a neurosis, characterized by a local vasomotor paralysis, affecting the blood-supply of the eyes, nose, face and pharynx, and occasionally of the laryngeal and bronchial mucous membranes. Adrenalin overcomes this condition, restores the normal balance in the local blood-pressure, and thus aids in bringing about a cure. The profession is to be congratulated that it has at last an agent that, if not a specific, fulfills the therapeutic indications more completely and with greater satisfaction than any other remedial measure recorded in the history of medicine.

Epicarin in Ringworm.—G. C. H. Meier (*Gaillard's Med. Journal*, Aug., 1902) says: From among the parasiticides it is important to select one which will not produce too much inflammatory action, and especially one which has sufficient penetrating power to destroy the fungus in the deeper layers of the skin. Such drugs as corrosive sublimate, chrysophanic acid, carbolic acid and naphthol sometimes provoke very unpleasant irritation unless very carefully used by the physician himself, and are thus impracticable in many instances. Lately I have been using a derivative of naphthol, known as Epicarin, and I find it very efficient and agreeable of application. It is a yellowish powder, soluble in alcohol and ether, and has been highly recommended by the late Professor Kaposi, of Vienna. Among its advantages are that it produces but little irritation, is non-poisonous and odorless. It may be applied in alcoholic solution by means of a brush or in a 10 per cent. ointment. As it tends to leave the skin rather dry and rough, it is usually advisable to apply some zinc ointment after its antiparasitic action has been completed. The number of applications to be made will naturally depend upon whether a hairy or non-hairy part of the skin is affected. In ringworm of the scalp it may be necessary to make from six to twelve applications, while in ringworm of the extremities two or three applications may suffice.

Heroin in Pediatric Practice.—N. G. Price (*The Philadelphia Medical Journal*, February 14, 1903) concludes as follows:

1. Heroin is a non-irritating remedy, the only untoward symptom I have ever met with being vertigo of a transitory character. Its dose should be limited to that ordinarily given by me, namely, 1-240 grain to a child one year old.

2. It possesses antispasmodic properties more potent than the bromides and the belladonna group of remedies.

3. It is a sedative to all mucous membranes, but particularly to the mucous membrane of the respiratory and genito-urinary apparatus. It soothes irritation and allays congestion.

4. It diminishes peristaltic hyperactivity and hypersecretion of the intestine.

5. Heroin is rapidly absorbed by the rectal mucous membrane when previously washed free from fecal accumulations, exerting in this manner of administration its

usual influence. The dose *per rectum* should be double the dose per mouth.

6. This drug is completely oxidized in the system and produces no cumulative symptoms.

7. Heroin hydrochloride is preferable to the alkaloid itself, because it is readily soluble in all vehicles and more rapidly absorbed. Heroin is not adapted for mixtures or for hypodermic use because of its insolubility.

8. Heroin hydrochloride is compatible with the expectorants and with the other antispasmodic, analgetic and sedative remedies.

Arsenic in Chorea.—F. M. Pope (*British Medical Journal*, October 18, 1902) says of the administration of arsenic in chorea:

See that the tongue is clear before commencing treatment, and if not, give a mild mercurial purge and a stomachic mixture for 48 hours.

Put the patient on a bland and easily digested diet. For children this will naturally consist principally of milk food, but in adults it need not be so.

Give the drug in a much diluted form, and in the same dilution throughout. Pope usually gives ½ minim of the liquor arsenicalis B. P. in one ounce of water as the first dose to a young child, and when increasing the dose give a larger quantity of the same mixture instead of increasing its strength; for example, a child of five years would have one ounce three times on the first day, two ounces as frequently on the second, four ounces on the fourth, and so on as long as no unpleasant symptoms manifest themselves. The stomach is much more tolerant of the drug under these conditions. The smaller and earlier doses are usually given after meals, the larger ones taken during meals. There is no difficulty in getting even a young child to take six, or even eight, ounces of fluid. In adults the treatment may be commenced by giving two, or even three, ounces of the mixture thrice daily as a dose. This is equivalent for children to an initial dose and daily increase of 0.025 gr. or 0.0018 gram of arsenious anhydrid thrice daily, the dilution being about 1-40,000, or 0.002 per cent.

Do not discontinue on the first attack of vomiting. This is often due to accidental causes, and the patient may be able to go on for two or three days without a recurrence.

Increase the dose daily. A daily increase of 2½ minims to each dose is usually well borne.—*St. Louis Medical Review*, February 7, 1903.

Rheumatism in Children.—What does the physician wish to accomplish in acute rheumatism? 1. To control the fever. 2. To relieve pain and render the patient comfortable. 3. To check the arthritis and other local symptoms. 4. To prevent involvement of serous structures, notably those of the heart.

Treatment is alkaline and salicylic method. The alkaline treatment consists in giving large doses of alkaline salts. The author thinks this method is depressing and also tends to cause anemia. Nor does this method give less of heart complications and relapses. The salicylates shorten the duration and lessen the severity of the disease, and so prevent the complications. The author has not been able to combine the two treatments in children, because both drugs must be used in large quantities, and both tend to upset the stomach when used singly, while combined they are certain to do so.

Begin treatment with calomel in small repeated doses. Also keep bowels open in the whole course of the disease. Next give salicylate of soda, grs. v, every three hours, to child of six. After the symptoms lessen, then lengthen the interval. Salophen is the best substitute, but cost is high. Hyperpyrexia is to be remedied by cold baths. Begin iron tonic as soon as temperature goes below 100°. Also when the anemia is marked give cod liver oil.

Local treatment: Protect joints from air. Use light splints. Heat to joints is very

pleasant to patient. Never use blisters in young children. Put patients to bed and keep them there.—Floyd M. Crandall.

Drugs Contra-indicated for Nursing Mothers.—According to the *Chemical Review* for January, the following drugs are eliminated by the milk glands, and care should therefore be taken in prescribing any of them for nursing mothers: Strychnine, carbolic acid, quinine, cascara sagrada, sulphur, arsenic, iodine, opium, iron, bismuth, senna, rhubarb, jalap, zinc, mercury, potassium iodide, magnesium sulphate, castor oil, garlic, oil of turpentine, oil of copaiba, and all the volatile oils. —*The Medical Council*, February, 1903.

Epilepsy and Intestinal Antiseptics. — William H. Thomson (*N. Y. Med. Journal*, Nov. 15, 1902), in an article on "Pathology and Treatment of Epilepsy, says:

Intestinal antiseptics are always prescribed by me sooner or later in treatment, particularly if a bad breath accompanies or follows the attacks; and also in those cases characterized by attacks coming in groups. It is the peculiarity of toxemias with nervous accompaniments that the poison has to accumulate up to a certain critical point before the nervous explosion takes place. This is shown in the case of uremia, gouty asthma, and in migraine, which affection, I have taught for many years, is due to a toxemia and not to a neurosis, and should be treated as such. I believe, therefore, those epileptics whose attacks come at short intervals, to be followed by comparatively long periods of freedom, are pretty surely connected with auto-infection from the intestines.

Chronic Diarrhea. — Edward Zugsmith (*Amer. Medicine*, Feb. 28, 1903) concludes his article as follows: Treatment for this condition requires careful attention to detail, and persistence. The indications are two—to correct the digestive fault which has been primarily the cause of the trouble, and to repair the damage that has already been done. Of prime importance are the questions of diet and hygiene. The diet must be strict and carefully selected, with reference to idiosyncrasy, state of gastric secretion, and microscopic examination of the stools; careful attention must be given not only to the kind of foods allowed, but also to the mode of their preparation. In severe cases it may be necessary to restrict the diet to milk alone, or to egg water, in other cases it will answer to cut off those foods that are generally conceded to be difficult of digestion, while all grades occur between these. Irritants, such as pepper, mustard, vinegar and the like, are not permissible; foods leaving bulky waste after digestion, such as fruit, cabbage, and so on, are inadmissible, while cold or frozen foods, like soda water and ice cream, must be prohibited. Dishes prepared by cooking in fat, as all fried articles are, and those having fat cooked in them, as in pies and cakes, are also to be eschewed, while pure sugar may often be allowed in small quantity with foods.

Of drinks in common use, tea on the whole is the best, cocoa and ginger ale are allowable, and when alcohol is desirable, Tokay wine or good brandy should be preferred.

Under the hygienic measures should be the use of water externally, rest, exercise, massage, travel, and residence at health resorts. Bathing is important, and should be indulged in daily, and one who chooses to individualize will find advantage now in one method of application and now in another, until he has applied every variety of bath at his command.

As to rest, it is advisable to place patients having severe cases in bed and to keep them there perhaps for weeks. Patients having milder cases may be advised to retire to bed early and remain there late in the morning, resting a while again during the afternoon. Between times light exercises should be employed, those being chosen which do not cause strain on the abdominal muscles or increase the intra-

abdominal pressure. Exercise must always be graded cautiously to the endurance of the patient and with the knowledge that, if he is allowed to go beyond that point, much harm will result. When massage is employed the abdomen is to be exempt. I have known blood to appear in the stool from failure to appreciate the advisability of this.

Formaldehyde in Food. — Manget and Marion recommend, for the detection of formaldehyde in milk, the following procedure: Lightly powder the surface of the milk with amidol or amido-phenol, and leave stand for some moments. Normal milk, or that containing boracic acid, develops a salmon coloration; milk containing formaldehyde, a light-yellow coloration. To detect formaldehyde in meat jelly, place a little of the liquefied jelly in a tube, and add some crystals of amidol; shake up. If formaldehyde is present, a yellow coloration is produced, turning to a dirty yellow on the addition of a drop of ammonia. When the jelly contains no formaldehyde, a brownish-rose color is produced, turning to blue under the same conditions.—*The Cincinnati Lancet-Clinic*, January 31, 1903.

Incompatibilities of Antipyrin. — *La Revue Médicale du Canada* (July 2, 1902) tabulates the incompatibilities of antipyrin as follows: 1) Substances which contain nitric acid, such as amyl nitrite, ethyl nitrite, etc., produce a green color with antipyrin-iso-nitro-antipyrin; since this substance or its products of decomposition are toxic, it is necessary to avoid mixtures of antipyrin and substances containing nitric acid; 2) antipyrin with mercury bichlorid gives rise to a very toxic substance; 3) solutions of antipyrin are precipitated by carbolic acid; 4) antipyrin and sodium salicylate when powdered and mixed result in a sticky, semi-liquid mass; 5) antipyrin and chloral when mixed form an oily liquid, which has not the properties of its components; 6) the mixture of antipyrin and B-naphthol gives a product which quickly liquefies; 7) solutions of antipyrin are precipitated by tannin; 8) antipyrin raises the co-efficient of solubility of caffein and the salts of quinin.—*American Medicine*, November 8, 1902.

Iodipin.—I. S. Cohen (*American Medicine*, February 14, 1903), under the heading of "Substitutes for Potassium Iodide," says:

Iodipin is by far the most important substitute for iodin. The manufacturers state that it is a chemical combination of iodin and of oil of sesame. As it is put upon the market it contains 10 % of iodin and possesses the oleaginous taste of sesame oil. According to Winternitz, it appears after its internal administration in almost every tissue of the body. Being insoluble it has no effect upon the stomach, but is partially broken up by the intestinal juices and iodin liberated. According to Blank, however, it is in greater part absorbed unchanged and after its absorption gradually decomposed, liberating its iodin very slowly. It therefore exercises a much more persistent and prolonged action than do the alkaline iodids. Gastric disturbance is rarely caused by iodipin, and it has been asserted that the drug does not produce the symptoms of iodism. Hoenigschmiedt gave a patient in the course of ten weeks 590 cc. (20 ounces) of iodipin hypodermically and 11 cc. (3 drams) by the mouth, representing 74 cc. (2½ ounces) of iodin, or about 7.5 cc. (2 drams) of iodin per week. Another patient received hypodermically 15 cc. (½ ounce) of iodin daily, representing 1.5 cc. (24 minims) of iodin; in neither case was there any disturbance of digestion or any symptoms of iodism. Iodipin appears to be absorbed with great readiness, Frieser having detected it in the urine and saliva within fifteen minutes after its administration by the mouth. It is rarely found in the feces after its ingestion, showing that it is completely absorbed. It would seem that it is absorbed less rapidly after hypodermic administra-

tion than when given by the mouth, as Frieser states that it takes two or three days to make its appearance in the secretions after subcutaneous administration. Iodipin seems to be useful for every purpose for which potassium iodid has been employed. The literature of its therapeutics is too large to be reviewed in detail. The reporters agree that in the conditions in which iodin is ordinarily employed, such as syphilis, neuralgia, asthma, arteriosclerosis, and the like, the remedy is fully equal to the iodids. Some observers rate it as superior; thus Klar reports a case of asthma in which potassium iodid, as well as arsenic and atropin, had failed, but which was promptly relieved by the use of iodipin. Kreiblich reports a case of actinomycosis of the cheek cured by local injections of iodipin. The drug is best administered in the form of an emulsion. Either of the following formulas may be employed, the preference being perhaps given to the emulsion made with egg:

Iodipin.....60 cc. (2 fl. oz.)
Powdered acacia.....30 cc. (1 fl. oz.)
Peppermint water....90 cc. (3 fl. oz.)
Syrup .....30 cc. (1 fl. oz.)
Make an emulsion.
Dose: One to two teaspoonfuls.

Make an electuary.
Powdered cacao..... } equal parts
Sugar..... }
Iodin.....48 cc. (13 fl. drams)
Yolk of one egg.
Oil of cinnamon ....1 drop
Dose: One to two teaspoonfuls a day.

When the patient objects seriously to the taste of the preparation it may be given hypodermically; about ten cc. being injected subcutaneously rather than intramuscularly into the gluteal region of the back. The fluid should be warmed previously, as when cold it is a little too dense for ready injection. We cannot dismiss the subject of iodipin without calling attention to its use as a diagnostic agent in determining the motor power of the stomach. Its value for this purpose depends upon the fact that it is not absorbed in the stomach, but is very rapidly broken up in the intestine; ordinarily the iodin reaction with starch may be demonstrated in the saliva in 10 to 45 minutes after the administration of a dose of iodipin. If a longer time than this is required there is serious interference with the motor power of the stomach.

Liquor Carbonis Detergens.—As *liquor carbonis detergens, coal-tar saponine, coal-tar Le Bœuf*, coal-tar itself has been used for some time in the treatment of diseases of the skin with success, especially in those cases in which the ordinary wood-tar has been found useful, such as chronic eczema with marked thickening and scaling. In this disease it diminishes hyperemia and affords marked relief to the itching, which is so frequent and troublesome a symptom. Indeed, in the opinion of no less an authority than Mr. Jonathan Hutchinson, it is the most generally useful of all the remedies employed in this affection; and Leistikow declares that it relieves itching as no other remedy does. The latter finds the simple alcoholic solutions more effective than the combination with tincture of quillaia, which is used in the preparation of the liquor carbonis detergens, and employs the following formula:

℞ Olei lithanthracis .....30.0 (f℥j)
Alcohol, 95 per cent.....20.0 (f℥vij)
Aether..... .....10.0 (f℥iiss)
M.

My own experience with this remedy leads me to value it highly in the treatment of chronic eczema, and to a less degree in psoriasis. It may also be used as an ointment, the best vehicle for this purpose being, according to Leistikow, the *unguentum caseini* of Beiersdorf.—M. B. Hartzell (*Therapeutic Gazette*, Jan. 15, 1903).

Pericarditis. — Frank X. Walls (*The Medical Standard*, February, 1903) says of treatment: The etiological factor, if it can be determined, may in any case of pericarditis suggest special therapeutic indications, but as a rule the treatment of pericarditis is symptomatic. The pain must be relieved by local applications of ice, or blisters or scarifications, or may be

the pain will demand the internal administration of opium. The heart muscle might demand the cautious administration of tonics, such as digitalis, ammonia, camphor or caffein, and when the effusion is considerable an attempt might be made to cause its absorption by the administration of diuretics, such as diuretin, or cathartics like elaterin, or alteratives, such as the iodids.

What other symptoms may arise that demand treatment should receive a rational therapy.

Whenever the fluid has accumulated in the pericardial sac to an extreme degree, whenever the fluid embarrasses the action of the heart, or hinders the ready emp'ying of the venæ cavæ, or whenever the fluid has been for a long time in the pericardial sac and there is evident little tendency of its absorption after, let us say, one month, a paracentesis of the pericardium should be made.

The point of election for such a puncture is the fourth or fifth left interspace, a half to one inch from the border of the sternum. The operation is a simple one and should be performed much more often than commonly done. If the fluid be purulent, the sac should be freely opened and drained. It is almost unnecessary to add that these children should be kept very quiet in bed and given a light nutritious and easily digested diet.

Peroxide of Hydrogen.—C. E. Boynton (*Detroit Medical Journal*, Feb., 1903), in speaking of the use of this drug, remarks as follows: The child with the suppurating ear gets it with the dropper; the diphtheritic membrane gets it with the spray; the chronic ulcer of the leg I treat by providing the patient with an atomizer full of the peroxide, to be used *ad libitum*. Every kind of a sore requires it, and, if the condition is at all suggestive of erysipelas, a painting with pure ichthyol. Hydrogen peroxide will lift gunpowder out of a wound on the foam, and it has a similar effect on all kinds of dirt. Diluted, I have used it as an eye-drop and as a wash for the newly born. Of all the ways of using this agent, the most serviceable seems to be the spray. In this way it can be handled economically and just at the point where we want it; the projecting force actually helps us to rapidly undermine the pus.

For suppurating gums and stomatitis, I use it in frequent half-drachm doses, and in the white tongue and sweet breath of blood poisoning it should be used internally and locally almost without stint. It has never been my ill-fortune to treat many obstinate cases of diarrhea; possibly I use the sulphocarbolates and large doses of calomel too extensively to allow many, but I am inclined to think that hydrogen peroxide by mouth and in enema would be very serviceable.

Diet for Consumptives.—Robin (*Bull. Gén. de Ther.*) advises a large glass of milk on walking, with a dash of Vichy water. Breakfast at 8, with a piece of fat steak or a cutlet, two soft eggs, a little toast, oatmeal with abundance of cream, but little sugar, and two glasses of milk or a cup of coffee. At 9, cod-liver oil and a little milk, or glass of milk with the yolk of an egg. At 10, a large cup of beef tea made from raw meat, after which the patient lies down until noon. Dinner at 12:30, with fish, rice, chicken, cauliflower and a slice of well-buttered bread, one or two glasses of milk, and baked apples and cream. At 2, cod-liver oil, or milk with the yolk of an egg. At 4, sandwich of scraped raw beef, and rest or sleep till 6, when the supper can consist of beef, fish, mutton or raw beef, with spinach cooked in cream, and blanc mange or vanilla ice cream. At 8, cod-liver oil, or milk and yolk, and at 9 or 10, a glass of iced or very hot milk, or a cup of good beef tea. At night, if wakeful, a glass of milk at 1 or 2. This régime is tolerated by nearly all patients and has given the best results in his extensive experience. Milk is the constant beverage.—*S. Cal. Pract.*, Jan., '03.

Book Notices.

THE INTERNATIONAL MEDICAL ANNUAL: A Year-Book of Treatment and Practitioner's Index. 1903. Twenty-first year. New York. E. B. Treat & Co., 241 to 243 West 23rd Street.

This work requires no special comment from the reviewer's pen, for the facts that it has reached the twenty-first year of its publication, and that its collaborators are men of authority, speak for themselves. The arrangement of the subject matter is essentially the same as heretofore, and the general excellence of selection has been a feature. It seems as if medical therapeutics could have been enlarged at the expense of some of the special drugs treated in detail. The remarks on X-ray and electro-therapeutics are especially commendable. The numerous plates and diagrams form a feature of the book. We recommend the year-book to those who have not been in the habit of procuring it as a ready and reliable reference of the medical progress of the past year or so.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION. By Prof. Dr. CARL VON NOORDEN. Authorized American Edition. Translated under the Direction of BOARDMAN REED, M.D. Part II, Nephritis. New York. E. B. Treat & Co., 241 to 243 West 23d Street. 1903.

The second number of this practical and valuable series deals with nephritis in its two most important forms—acute nephritis and contracted kidney. The work is a type of its kind in showing the individuality of the author and in upsetting the "familiar directions handed down from an earlier period when clinical observations were less exact and pathologic theories more nebulous than at present." His therapy is based upon a broad and vast experience, and, while not in accord with many authorities, may be safely followed. The series should prove a valuable addition to the library.

SELECTED PRESCRIPTIONS.

ACUTE CORYZA.—

℞ Pulv. camphoræ..... ʒ ij
Acidi tannici..... ʒ ss
Pulv. sacchari alb.....ad ℥ ss

M. Sig. Insufflate twice daily. —LEFFERTS.

CHOLERA INFANTUM.—

℞ Sulphate of sodium..... 10 gm.
Chloride of sodium..... 5 gm.
Water, sterilized ..... 1000 cc.

M. Sig. One ounce injected subcutaneously repeat three to six times daily. —LE SAGE.

EPILEPSY.—

℞ Potassii bromidi..... ℥ ss
Tinct. belladonnæ..... ʒ iij
Tinct. Simulo.....q. s. ℥ iv

M. Sig. ʒ j *t. i. d.* p. c. in water.—PETERSON.

INTERMITTENT FEVER.—

℞ Massæ hydrargyri..... gr. x
Ext. hyoscyami..... gr. v
Quininæ sulphatis..... gr. xx

M., ft. pil. No. x. Sig. One every hour during the afternoon. —E. J. KEMPF.

PERICARDITIS.—

℞ Infusi digitalis..... ℥ ss
Potassii acetatis.....
Spir. ætheris nitros.....āā ʒ ij
Aq. cassiæ..... ℥ iss

M. Sig. Tablespoonful every four hours.
—KILGOUR.

SUBACUTE RHEUMATISM.—

℞ Sodii salicylates..... gr. x
Potassii iodidi..... gr. v
Vini colchici sem..... m. viij
Syrupi.....
Aquæ .....āā ʒ ss

M. Sig. One dose, every three or four hours.
—E. G. TUFFS.

TAPEWORM.—

℞ Oleores. filicis maris,
Ext. fl. kamal.....āā ʒ iss
Ol. ricini .... ℥ ss
Pulv. acac.,
Sacch. alb.....āā ʒ ij
Aq. menth. pip.....q. s. ℥ ij

M. Sig. Take in morning after fasting 2 hours. R. H. STEINBACH.

CHOLERA INFANTUM.—

℞ Tannalbin ..... ℥ ss
Zinci sulphocarbolatis ..... ʒ ss
Cupri arsenitis .....gr. $\frac{1}{10}$
Bismuthi subgallatis..... ℥ ss
Aq. cinnamomi .....q. s. ℥ iv

M. Sig. ʒ i q. 2 to 4 h. in a child of 1 to years. H. W. THOMPSON.

The American Therapist.

A MONTHLY RECORD OF MODERN THERAPEUTICS,

WITH PRACTICAL SUGGESTIONS RELATING TO THE CLINICAL APPLICATIONS OF DRUGS.

VOL. XI. NEW YORK, JUNE 15, 1903. No. 12.

Original Articles.

TUBERCULIN.

By J. W. WAINWRIGHT, M.D., New York.

Under the name of tuberculin we understand, in the strict sense, only the preparations devised by Koch. Yet numerous other substances, prepared through the agency of the tubercle bacillus, have since been put forward as remedies for tuberculosis, but no generic term has as yet been introduced into general use which comprises them all. They are either toxins or antitoxins, the former representing the natural products of the bacillus and the latter the antisera, which are produced by injecting toxins into the circulating blood of animals. Generally speaking, the principle of antitoxin-therapy is of universal applicability, because it only implies the administration of a harmless chemical antidote to a deadly poison. The principle of toxin-therapy, on the other hand, is not readily understood and has made no universal headway in the specific treatment of infectious diseases.

In the instance of tuberculosis, however, toxin-therapy, as introduced by Koch, has far more vogue than antitoxin treatment. Admitting that the toxins (Koch's tuberculins) have undoubted efficacy in curing tuberculosis in its incipient stages, we must also admit that the rationale of its action is far from clear. One of the earlier theories was based on the fact that excess of accumulation of the secretions (toxins) of bacilli tend to destroy the latter. But it soon became evident that tuberculin could not be given in large doses, nor at all to confirmed consumptives.

Another view is, that the injection of toxins, by producing an antitoxin in the blood, naturally tends to destroy the activity of the bacilli already in the body.

A third theory is, that tuberculin, by inducing a sort of mild artificial tuberculosis, tends, after repeated injections, to produce a degree of immunity like vaccination.

History. At the Tenth International Medical Congress, held at Berlin in 1890, Robert Koch announced the discovery of a preparation which, when injected into healthy guinea pigs, would render them immune to tuberculosis. He alleged, furthermore, that this remedy would check the further progress of the disease in infected animals, and indeed would cure them. At that time Koch stated that his researches were not completed and he was therefore not prepared to make known the origin and preparation of this new remedy, which he called tuberculin. He contended that tuberculin, acting in conjunction with the tubercle bacillus, so intensified the local action of the bacillus that the tissue surrounding the tubercular nodule was softened and then cast off with the tubercles. In other words, when the tubercle bacillus grows in the lung it produces a toxin which slowly destroys the surrounding tissues through ulceration. This toxin enters the blood circulation and causes certain constitutional symptoms, for instance, the so-called hectic fever.

Now, when a small quantity of this tuberculin is injected into a normal person, it produces no febrile reaction, because sufficient of it is not present in the system. If tuberculin be injected into a tuberculous subject, however, a toxin is added to a pre-existing toxin and the combined

amount produces a fever, demonstrating the existence of a toxin-producing focus in the body. In this way tuberculin is recognized as a means of diagnosing doubtful cases of tuberculosis. Koch further stated that tuberculin re-inforced the toxic action of the bacillus, and so induced a rapid dissolution of the tubercular masses and hastened their discharge from the lung.

On November 13, 1890, Koch published a detailed article in the *Deutsche medicinische Wochenschrift*, describing the therapeutic value of tuberculin in man, but he specifically stated that it should only be used in the earlier conditions. The cases in which this lymph was first used were five men, four suffering from phthisis and one of suppurating tubercular glands of the neck. Just prior to the publication of Koch's article two of the phthisical patients were discharged cured. Later in November the other two were improved. The case of tubercular adenitis improved rapidly under tuberculin treatment, although all forms of treatment had previously failed. In this article, Koch again stated that his remedy would not directly kill the bacillus, but that it acted specifically on the living tubercular tissue, caused a necrosis thereof and hastened its disintegration. He also claimed that the lymphs increased the resistant power of healthy tissue, and thus checked the further progress of the disease.

The first inoculation of Koch's tuberculin made in America was in New Haven, Conn., by Dr. Francis Bacon. He used the lymph in three cases. In New York it was first used in the latter part of December, 1890, at the Hospital for Ruptured and Crippled. St. Luke's and Mt. Sinai Hospitals quickly followed.

Unfortunately enthusiasm soon became exaggerated, and instead of confining the use of tuberculin to properly selected cases, the profession employed it in far advanced cases, in which the vitality and recuperative powers were much reduced. Naturally, the result was very disappointing. Here and there came reports of cases doing very much worse after the tuberculin injection. Unfavorable reports far exceeded the favorable ones, and the profession soon denounced tuberculin as not only worthless, but distinctly harmful. After this stage of depression came one of calm, scientific investigation.

Varieties and Preparation.

Denison cites the following varieties of tuberculin:

1. Tuberculin (Koch).
2. Tuberculin New (Koch).
3. Tuberculocidin (Klebs).
4. Antiphthisin (Klebs).
5. Antiphthisic Serum (Fisch).
6. Watery Extract (von Ruck).
7. Tuberculosis Antitoxin.

1. *Tuberculin* (*Koch*) (original product), prepared by growing the bacillus on various media, such for instance as:

Sterilized meat infusum, 100 per cent.

Peptone, 1 per cent.

Glycerin, 4 to 6 per cent. M.

The inoculated medium is incubated at 37° C. for six weeks and then sterilized, filtered through porcelain and concentrated to 10 per cent. This is known to contain two substances, one a fever producer, the other a necrotising agent.

Tuberculin A.—Extract of bacilli prepared with decinormal caustic soda solution, neutralizing and filtering. Prepared from virulent cultures. This is not free from tubercle bacilli, as five to ten are seen in the field when examined by the microscope, dead of course.

Tuberculin O.—Dried and pulverized tubercle bacilli dissolved in distilled water, and centrifugalized. The supernatant fluid is the tuberculin O, while the lower layer or

Tuberculin R, consisting of a colloid sediment, is designated T R, or tuberculin rest. This is again dried, pulverized, and treated as before in a centrifuge, the process being repeated till the last bacillus is destroyed, and the whole fluid has become perfectly transparent. This corresponds with the so-called Tuberculin New (Koch).

3. *Tuberculocidin* (*Klebs*).—Klebs attributed the disagreeable after-effects of tuberculin to impurities. He announced having extracted a harmless albumose, which would act specifically on the tubercle bacillus. He treated crude tuberculin with platinum chlorid, which precipitated the alkaloidal elements or toxins, leaving a solution which he called Tuberculocidin, on account of its alleged antagonism to the bacillus.

4. *Antiphthisin* (*Klebs*). — Apparently Klebs has abandoned tuberculocidin for his more recent product, Antiphthisin. He analyzed tuberculin and states that it contains:

a. Tox-albumin precipitated by sodic iodid of bismuth.

b. Alkaloids.

c. An albuminoid derived from dead bacilli.

d. Sozalbumin, precipitated by alcohol (absolute) after removal of the toxic elements. Klebs claims that an aqueous solution of this sozalbumin, which he calls Antiphthisin, possesses the curative properties of tuberculin and not its toxic effects, and declares it to be of value in pure tuberculosis, but not in mixed infection. The remedy has no diagnostic value.

Preparation: This is obtained by adding ½ per cent. of kresol to a bouillon culture of tubercle bacilli and filtering. The filtrate is treated with sodium-bismuth-iodid, precipitating the toxalbumose, whereas sozalbumose remains in solution. Sozalbumose is now treated with five volumes of absolute alcohol, and from this Antiphthisin is derived, prepared for use by adding 0.2 per cent. orthokresol.

5. *Antiphthisic Serum (Fisch):* Dr. Carl Fisch immunized selected horses by injecting Koch's new tuberculin. The injections are given in gradually increasing doses, during a period of four (4) months or until the enormous dose of 50 cc. of tuberculin R (new) is reached. The resulting serum is called Antiphthisic Serum.

6. *Watery Extract* (*von Ruck*), as its name implies, is an aqueous extract of tubercle bacilli, said to be free from all the products of the culture media. The bacilli are filtered out of the culture and the remains of the culture medium washed with ether. The bacilli are dried, pulverized and the fats extracted with ether, dried and powdered again and dissolved in distilled water.

7. *Tuberculosis Antitoxin:* Boinet immunized goats with injections of tuberculin and claims the resulting serum was used in eight cases of tuberculosis with marked benefit. Maragliano, of Genoa, treated a large number of cases with serum obtained in a similar manner from the horse, ass, and dog.

The Diagnostic Value of Tuberculin.

The tubercle toxins have other fields of usefulness than merely those of therapy and immunization, in that they have the property of causing a general febrile reaction when injected. In a tuberculous person a surprisingly small amount is sufficient to produce this phenomenon. Although exceptions occur, a reaction produced by a minimal dose may be accepted as evidence that the individual is tuberculous. Hence the great diagnostic value of tuberculin both in man and cattle. Another diagnostic resource in which tuberculin may largely figure in the future is the agglutination test, analogous to the Widal test in the diagnosis of typhoid fever.

It is pretty generally conceded that tuberculosis is difficult of recognition in the earlier stages through physical signs; that it is all important to determine the disease in its incipiency, if a cure is to be secured, hence any measure which will disclose the presence of foci, or assist in confirming a diagnosis, is to be considered a boon to the subject. When public interest is aroused to devise means to stamp out this dread disease, it is but reasonable to expect the physician to lend his energies and to have recourse to such methods as will more especially clear up a diagnosis at such time in the progress of the dis-

ease as will reasonably insure, with appropriate treatment, a cure. When tuberculosis has progressed to the stage when physical signs alone clearly demonstrate the disease, the prognosis is less promising. In diphtheria there is almost a positive assurance of recovery if the antitoxin treatment is prompt and pronounced immediately upon the invasion of the disease. The one chance of cure in tuberculosis is appropriate treatment early in the disturbance, generally begun before objective signs point clearly to a diagnosis.

Sufficient evidence is at hand to establish the diagnostic value of tuberculin in the great majority of cases, from painstaking investigators both abroad and in America. J. M. Anders collected 3638 cases where tuberculin was so used with a reaction in 2185 cases. Of 1468 clinically doubtful cases 70.1 per cent. reacted. Anders claims in his paper presented to the "American Climatological Association," 1900, and published in the *Intern. Medical Magazine*, 1901, that "tuberculin furnishes positive information not otherwise obtainable, and permits the recognition of tuberculosis in its latent form as well as in its most incipient stages, or before its presence can be otherwise determined."

In a paper entitled "Nature's Cure of Phthisis and an Effort to Imitate it," presented to the Section on Practice of Medicine at the 1898 meeting of the American Medical Association, Dr. J. T. Whittaker says:

"The only natural agents of which we have any knowledge that are known to exercise an inhibitive action upon the tubercle bacillus are some of its own products, to wit, the various so-called tuberculins which have been extracted from culture soils. These agents, which constitute the most remarkable contribution to materia medica in modern times, give us the power of absolutely recognizing the disease in its very inception, and of nearly completely controlling it so long as the disease remains pure. There is nothing so subtle in medicine. Many obscure cases of failing health, of anemia, pleurisy, bone disease, are thus shown to be tuberculous, and tuberculin, further used in treatment, becomes a tonic in these cases of the very highest power."

These opinions are shared by Otis, de Schweinitz, Trudeau, Frazer and Biggs, Head, Elder, Denison, Webster, Boardman Reed, Northrup, Holmes, Madison, etc., in America, and Heron, McCall Anderson, Lapham, Cornet, Martin and Robbins, Berthensen, Post, Grasser, Vidal, Goetsch, Petruschky, Mittetal, Kossel, Grazia, etc., in Europe.

In the treatment of tuberculosis and for immunizing effects, tuberculin has not met with the success that it deserves, because, largely owing to the fact that it is not generally understood and the cases are not individualized, the proper dosage together with the frequency of administration is not determined. Reports declare, decidedly curative effects are secured in the treatment of lupus, bone tuberculosis, and even in the pulmonary form of the disease.

FACIAL ERYSIPELAS.

By Michael Schiller, M.D., New York.

Of all forms of erysipelas, the one most frequent by far is that of the face. Though often of a very mild type and responding to simple measures, it is sometimes ushered in and continues with marked and pronounced symptoms, requiring prompt and energetic means for its control and to prevent its spread.

Erysipelas in general is a condition for which most physicians have some favorite drug or local application, some therapeutic agent which, from long experience, they have weighed in the balance and found "not wanting." A long list might be mentioned were I to tabulate them. My purpose, however, is to outline a method which was applied to a large series of cases in the service of Dr. C. W.

Allen, and which served me so well that I have practically abandoned all others.

This method, the combined method of Allen (*Medical News*, April 8, 1899), presumes, and with great justice, I think, that many cases of facial erysipelas have their origin in the nasal fossæ and mouth. A careful attention to this phase of the subject will convince one that the mucous membrane of the nose or mouth is generally the seat of some morbid process and a suitable soil for the origin of the infection.

The first indication, then, in a case of erysipelas facialis is to thoroughly inspect the nose and mouth. For the treatment of the nose a cotton swab is saturated with a fifty-per-cent. watery solution of ichthyol and gently, but thoroughly, applied to both nostrils from the alæ to the naso-pharynx. This enables the medicament to come in thorough contact with all the parts, and at the same time relieves pain, acts as a cooling agent and opens up the nares by relieving congestion of the turbinated bones.

The next step consists in an application to the diseased area, and somewhat beyond it, of a ten-per-cent. solution of ichthyol in collodion. This combination seems particularly effective in preventing the spread of the disease and diminishing its severity.

Ichthyol is at present conceded to be the remedy *par excellence* for erysipelas; at times it acts almost like a specific. The collodion, by its contractile influence, compresses the superficial lymphatics, thereby reducing the spread of infection and absorption into the general circulation.

If, after these two steps have been followed, the disease has spread beyond the border of application, or if at the first visit the disease has reached the forehead, a compression strap (Woelfler) of adhesive plaster is applied around the head. For this purpose a strip of ordinary yellow adhesive plaster or the zinc-oxide plaster, corresponding to the circumference of the head, is prepared as follows: About two inches of one end, and that portion corresponding to the distance from one temporal region to the other, is left free and uncovered, while the balance of the strip is covered with gauze. The strip is then firmly applied to the forehead, encircling the head, and the free end is attached to the outside of the strip. In this way adhesion of the hair to the plaster is prevented and compression is firm and equable.

Of course, it is not maintained that this compression will prevent the spread of the disease to the scalp in every case; but the number of successful applications is sufficiently large to justify its general adoption. Should the scalp become affected, a wash of fifty per cent. watery solution of ichthyol has given better results with less disagreeable accompaniments than any other method I have tried, excepting perhaps the local use of liquor Burrowi.

This is my plan of treatment in facial erysipelas, and my results have been so successful that I have no hesitancy in urging a careful trial. Internally I use nourishing and sustaining diet, alcohol in the form of wines and whiskey if necessary, strychnin; and, in the declining stage, Basham's mixture for its tonic effects.

Odontalgia. — For the relief of toothache due to pulp-exposure many remedies are being suggested, but seldom do we find in modern literature any reference to tincture of opium (laudanum). It was thus used in olden times, and produces most satisfactory results; it has the advantage over morphine acetate of being more readily absorbed by the tissues of the pulp. Before applying it, the exposed area should be freely irrigated with water at blood temperature, and, if possible, should be made to bleed freely, when a small pellet of cotton saturated with laudanum should be placed upon the exposure.—*Pacific Med. Journal*, Feb. 1903.

*TREATMENT OF ITCHING.**

By Edward Bennet Bronson, M. D., New York.

In determining what measures are indicated in the treatment of pruritus, there are then two facts in its pathogenesis to be chiefly considered. One relates to the hyperesthesia which is the invariable accompaniment of morbid itching as a predisposing element, and the other to a local surcharge of nervous excitement.

The element of hyperesthesia, dependent as it is on morbid conditions more or less general, will be alleviated only as these general conditions are susceptible of improvement. In pruritus essentialis especially, discovery and treatment of systemic diseases or reflex irritations upon which the hyperesthesia may depend are of greatest importance. Unfortunately, in a large proportion of cases, our search will be attended only with indifferent success, and we can only base our therapeutics on general principles.

Such general principles there are, applicable, both to the treatment of the preliminary hyperesthesia and to the actual occurrence of itching. Their close observance, as well as a strict adherence to them, will in the end give much better results than following the prevalent inclination to try every new vaunted remedy, the rationale of which we know little or nothing about. With some theory to start with, even though a faulty one, if there are known facts woven into its texture, we have a standard by which to correct errors, as we gradually gather experience. If we rely solely on the experience of others, with empiricism for our only guide, our position is that of the blind led by the blind.

In the treatment of almost every disease we can learn something from nature's mode of relief. It is so in pruritus. It is natural for every animal when it itches to scratch, and for the time being, at least, that simple method does give relief.

It is worth the while to inquire how scratchieg relieves the itching. It is an instinct, inherited doubtless, from the remotest antiquity. But so far as the disease pruritus is concerned, the instinct is usually a false one. It assumes the presence of an offending body or miniature attack. There goes with it a subconscious impression of a vague and indeterminate character. Such impressions are always attended with an accumulation and excess of excitement, causing irritation, fret, and vexation, which become greater the longer the vague impression lasts. The act of scratching tends to divert the sensory engorgement in the skin into other energies, into freer channels of sensation. The relief temporarily afforded is not unlike that which a quick, vindictive blow at his adversary gives to the pent-up feelings of an injured and angry man. For the instant the accumulated nerve excitement is dissipated.

But while affording temporary relief, or relief that in ordinary, or what may be termed physiological, itching may be permanent, in morbid pruritus, in pruritus dependent upon a pre-existing state of hyperesthesia, the effect of this method is to augment the excitation, and will almost surely be followed by another engorgement with greater pruritic excitement than before. Furthermore, the resulting hyperemia, itself an accessory cause of pruritus, will very likely do more than offset the temporary diversion that the scratching affords, and, besides this, the injury done the epidermis renders it each time more vulnerable and more sensitive to irritating contacts. Scratching is an abuse of what would *a priori* seem to be a rational mode of treatment. But there are valuable suggestions to be drawn from nature's methods, nevertheless. It is possible to secure the same kind of relief that scratching affords in ways that are safer and that insure a relief that is more lasting. In the first place, acting on the suggestion of the implied presence of a foreign body, or some extra or intracutaneous irritant,

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our first care should be to avoid scrupulously all irritating contacts. Attention should be given to the clothing, especially to the quality of the underwear, to protection from changes of temperature, to excessive dryness or scaliness of the skin, to irritating discharges, and incidentally, also, to the prevention of scratching.

When trophic changes in the skin, especially those incident to inflammatory diseases, are the cause of itching, the local excitants are intracutaneous. In such cases, remedies that alleviate the inflammation or tend to heal the local disease are often erroneously called antipruritics, because, incidentally, along with the improvement in the inflammatory disease, the pruritus disappears also. Thus ichthyol, resorcin, tumenol, tar, benzoin, benzoic acid and sulphur preparations relieve hyperemia, which is often an accessory factor in the occurrence of pruritus, and they have a decided healing effect on catarrhal inflammations. But they are not true antipruritics.

But let us return to the suggestions afforded by the action of scratching. As already intimated, it creates a diversion, permitting the release of pent-up nerve excitement, deploying it in the exercise of other activities and other less vague sensations. The mere muscular activity is one diversion. Another lies in the substitution for the vague sensation of itching of another sensation which is more decided definite, like that of smarting, or pain, or else one that has a distinct perceptive character. A perceptive sensation is always evoked by a firm and moderately forceful contact. Such diversion can often be made effectual without scratching. Firm pressure of the itchy surface, or, instead of using the fingernails like claws, drawing them backward with some force, but not violently, over the skin, will often give almost the same relief.

The substitution of another sensation for that of itching is the rationale of the action of many of the antipruritics in common use. Thus the vinegar lotion in urticaria or prickly heat, lemon juice, cologne water, the pungent tinctures, as of lavender, veratrum, or camphor; chloroform in various dilutions, menthol, thymol and simple hot water act in this way, producing as they do more or less smarting or stinging of the skin. Judiciously applied, and when there is not too much inflammatory excitement, they often give relief and without injury to the skin. Some of them act in other ways also.

One of the most valuable remedies for itching, perhaps the most generally serviceable of all the antipruritics, is menthol. It is not an anesthetic to the skin, but it relieves itching as it relieves pain by substituting for these sensations a disturbance of the temperature sense. It is the feeling of coldness produced by menthol applications to the skin that extinguishes the pruritic sensation even more effectually than does the feeling of smarting. This drug may be used in ointment or oil or in dusting powder, but is more effectual in alcoholic solutions of from 2 to 4 per cent. Dissolved in a little cologne water, it seems even more efficacious, the cologne water itself having some antipruritic virtue. It may be used very freely if there is not too much inflammation, and it is a good plan, when itching is troublesome at night, to instruct the patient to take a bottle of it to bed with him, and to sop the solution on the moment any pruritus begins. To the menthol in the same preparation may be added thymol or chloroform. The last named combination is especially serviceable in urticaria.

Certain remedies relieve pruritus through a sedative action on the skin, including the cutaneous anesthetics. Hot water, when applied for a certain length of time, is decidedly sedative. Useful in many forms of pruritus, it is especially so in itching of the genitals and anus. Camphor combines with the revulsion action already alluded to a certain degree of sedation. In this connection also should be mentioned hydrocyanic acid and the cyanide

of potassium, though they are remedies that I have very rarely resorted to, nor have I found the local use of opium, belladonna, stramonium, or other sedatives of the same class of much avail. It might be supposed that such a decided local anesthetic as cocaine would be of great value in pruritus. But on the intact epidermis it is inert, and the same is true of orthoform. They have their uses, particularly in pruritus affecting the lower mucous orifices, which will be referred to later on. Thymol is in some degree anesthetic to the skin, notwithstanding its first effect is irritant, and is especially useful in certain cases of severe and persistent itching; when added to the menthol preparations, its anesthetic action supplementing the peculiar action of the menthol. It is a good antiseptic also. Many of the antiseptics are antipruritic, and some of them cause more or less cutaneous anesthesia. Notably is this true of the mercuric chloride and of carbolic acid. It seems to be the property of such antiseptics to retard vital action, or, by their further operation, to destroy it entirely. It is perhaps by impeding the molecular movements in the excited nerves that they relieve pruritus. Concentrated solutions both of mercuric chloride and carbolic acid produce decided anesthesia of the skin.

Of all the local antipruritics, carbolic acid is the most reliable and has the most lasting effect. It may be used in alcoholic or aqueous solutions, in ointment, or in oils. Though more or less efficacious in various strengths, to obtain its best effect it should be used strong. Its corrosive action on the skin is its chief objection, and it is well also, before applying it over extensive areas, to bear in mind the possibility of carbolic poisoning. This latter, I believe, is not a very serious danger if ordinary caution is exercised. Though I have occasionally observed smoky urine after a patient had used carbolic acid to excess, the symptom disappeared readily when the applications were stopped, and the harm done appeared insignificant. On the other hand, I have repeatedly encountered cases where patients with severe and extensive pruritus had used strong solutions of carbolic acid freely for months, and with no discoverable untoward symptom as a consequence.

The danger of injury to the skin from the caustic action is a more imminent one, when very strong preparations of carbolic acid are used, and such strong preparations are often needed. This caustic action may be neutralized, as is well known, by alcohol, so that over limited areas the pure acid may be applied, if washed off with alcohol directly afterward. Generally I have found a drying oil, linseed oil more particularly, the best corrigent. The linseed oil, being a keratoplastic agent, serves to offset the keratolytic action of the acid. A little liquor potassii may be added with advantage for its anticatarrhal effect as well as because it emulsifies the oil, together with some essential oil to correct the odor. The following is the prescription:

℞ Liquor potass. .... ʒ j
Acid. carbol..... ʒ ij
Olei lini .....q. s. ad ℥ j
Olei verbenæ ..... ♏ ij
M.

Applied once a day, especially at night, when itching is always at its worst, this 25 per cent. solution will often give greater and more lasting relief to an intense pruritus than any other remedy that I know of. Oftener than once a day it should seldom be used, lest it prove too corrosive. This maximum strength is suited more particularly to limited areas of pruritus in which inflammation is not a prominent factor, but the same or a somewhat weaker preparation may sometimes be used to advantage, and with safety for severe itching affecting the surface more generally.

These few remedies for external use by no means include all the local antipruritics, although, I believe, they comprise the best of them, or, at least, those that have best borne the test of experience. They chiefly serve, however, to illustrate

concretely the application of the therapeutic principles already referred to. They all have for their object to afford rest—to restore equilibrium to the perturbed nerves, and they do this either by removal of an offending irritant, by sensory diversion through substitution, or by direct sedation or anesthesia.

As to internal remedies for pruritus, aside from the general medication addressed to the special requirements of individual cases, there is unfortunately not much to say that is favorable. There are no internal remedies that can be definitely described as antipruritics. Though pruritus may be removed temporarily by narcotics, when the narcosis of the skin wears off, the condition is apt to be worse than before. Certain analgesic remedies relieve pruritus to a limited degree, but the relief is not lasting, and is offset by greater disadvantages. Thus antipyrine has been used with some success in itching, but it must be given in depressing doses, and is liable to produce irritable rashes of the skin, so that the remedy may be as bad as the disease. The toxic action of opiates on the skin is likewise objectionable, and is even more liable to be followed by aggravation of the pruritus. On the other hand, such general sedatives as the bromides are not only useful, but sometimes, particularly when there is great hyperesthesia, indispensable, and occasionally, when aggravated by loss of sleep, a hypnotic like sulphonal is indicated.

In urticaria or in pruriginous affections, in which an urticarial element is prominent, there would seem to be an indication for motor-depressants to overcome the spastic concentration of the skin muscles. Atropine is a recognized remedy in such conditions. Given in large doses, it will sometimes arrest or abort a paroxysm of violent urticaria in much the same way as does the attack of syncope that sometimes supervenes in severe cases. It is not a remedy I would often resort to, and the same may be said of pilocarpine, which has been recommended, and likewise of gelsemium. To such remedies in the very severe cases the cautious use of chloroform by inhalation is to be preferred, which also relaxes spasm and has not the attendant after-effects.

In toxic urticaria there is also an indication for antiseptic remedies, such as creosote or the salicylates. Administered in full doses during or at the outset of an attack, these drugs seem to be of decided benefit. This more particularly applies to cases of chronic or recurrent urticaria, in which the attacks are associated presumably with the formation of a toxin in the economy, incidental to deranged metabolism and usually following depressing influences of various sorts, such as overfatigue, worry, or exposure. In that simple form of urticaria toxica, that is the direct effect of error of diet, or, dependent on an idiosyncrasy of the individual, follows the ingestion of some particular article of food or some special drug, a speedy relief may usually be obtained by the administration of a brisk emetic at the outset, or a little later on of a saline purge.

Regarding the management of pruritus senilis, in so far as the disease is dependent on the common causes of itching already cited, little special consideration is required. Many of the common causes of itching are peculiarly apt to occur in the aged, especially such as obtain in pruritus essentialis. When eczema is associated with the disease, as it often is, whether it be the dominant and primary affection or is only secondary, to that mainly should attention be directed. But it is a noticeable fact that in pruritus senilis unaccompanied by eczema harsher methods of stimulating the skin are much better tolerated than in the ordinary essential pruritus. Indeed, patients often find relief that is more or less lasting from vigorous rubbing or friction of the skin, a kind of stimulation that would be pretty sure, in the end, to aggravate any ordinary pruritic disease. The difference may be due to the fact that in pruritus senilis a

considerable degree of hypopselaphesia is present—sufficient to render tactile impressions vague and perturbing. Paresthesiæ of any special sense are especially apt to occur in conditions of impairment of that sense. General stimulation of the skin tends to relieve the condition of impairment in much the same way as a din of sounds will often restore temporarily an impaired sense of hearing, when to the normal ear it would be disturbing or confusing. But, whatever its explanation may be, such cutaneous stimulation as has been referred to above as "sensory diversion by substitution" is especially effective in pruritus senilis.

In this condition, besides friction to the skin, electricity has been found especially useful, particularly faradism or the electric brush of the static machine. Internally cannabis indica, probably because of its well-known sensory stimulant action, is sometimes of benefit when given in full doses. Strychnine is decidedly an appropriate remedy.

For those who are subject to pruritus hyemalis, it is especially important that digestion and general nutrition should be kept in good order and all indiscretions in eating and drinking should be avoided. After any excess in alcoholism, the night itching is always worse. At the first onset of cold weather thick underclothing should be put on, or the legs (where the trouble is usually worst) may be protected by long, woolen, footless stockings, drawn over the customary underwear. An antipruritic should be ready at hand during the night, the best being an alcoholic solution of menthol or thymol. In the morning search should be made for any points of excoriation which are liable to become the starting points of an eczema, and a healing salve should be applied. Inasmuch as the skin is apt to be dry, and a dry skin is prone to itch, cold cream or other unguent should be rubbed in, especially after the bath.

Bath pruritus is more difficult to control, even than the winter pruritus. Something may be done to mitigate it by certain regulations. The temperature of the water and also of the room should be comfortably warm. Sometimes the addition of salt to the water makes it less irritating. Soap should be used sparingly, and only the blandest kinds should be used. A superfatted soap, such as the thymol Baby Soap of Eichhoff, answers very well. After the bath the skin should be thoroughly dried, but with the softest towels and with the least possible friction of the skin, and afterward a little cold cream and powder applied. Arsenic as an internal remedy for this peculiar form of hyperesthesia has been highly recommended, and occasionally has a beneficial effect.

In those localized forms of pruritus that occur about the anus or external genitals, search should first be made for the indicatio causalis—for possible sources of reflex irritation, or for any more general condition that may be held responsible, such as lithemia, neurasthenia or diabetes. Excessive alkalinity of the blood is said to be sometimes such a causative condition, and to be amenable to treatment by the mineral acids. Many of these conditions do not yield readily to treatment, and meantime we must chiefly rely on more direct measures, which will usually give a much quicker return.

In deciding what local remedies to use, we should take into consideration the presence or absence of inflammatory complications, nor should the possible presence of pedeculi be overlooked. When inflammation is added to the pruritic excitement, as may be the case in pruritus vulvæ more particularly, the more effective antipruritics may have to be deferred for a night or two. Emollients, lotions of aluminum acetate, simple Lassar paste (without salicylic acid) with two to three per cent. carbolic acid, or with ten per cent. orthoform, perhaps preceded by an application of cocaine, may answer better till the inflammation is allayed. Cocaine is sometimes indispensable when the itching is intense, but it is not a good remedy

for prolonged use. It is only serviceable on mucous membranes or abraded surfaces; it gives only temporary relief, and when long continued produces vascular atony and increased disposition to hyperemia, an effect often noticed in inflammatory conditions of the mucous membranes of the eye and nose. Orthoform in powder is often useful on abraded surfaces or fissures both of the vulva and of the anus.

Lassar paste has an advantage over ordinary ointments (which, as a rule, are not well borne in pruritus of the vulva or anus) because of the starch which it contains, which makes it less heating as well as permeable to moisture, promoting the escape of any irritating exudations from the surface.

Applications of hot water sometimes have an excellent effect, especially where the parts are thickened from traumatisms or long-continued inflammation. The temperature of the water may be gradually raised to 110° F., and the applications should be continued for several minutes.

But the sovereign remedy for pruritus vulvæ or pruritus ani is carbolic acid. No other remedy is so effectual or gives such prolonged relief. A single application of the strong oil mentioned above will often afford rest and release from itching for an entire night. But it should not be often repeated nor applied too lavishly. More than one or two applications of this strong preparation in twenty-four hours would be liable to do injury. The principal seat of itching, whether of the anus or vulva, is just at the junction of the skin with the mucous membrane, and much beyond these regions the applications need not go. Should the itching recur during the night, it is better to employ some other antipruritic, such as a five-per-cent. solution of menthol in olive oil, or cocoa butter applied on a folded rag or bit of sheet lint. In less acute cases there is a multitude of remedies that will give more or less relief. Where a catarrhal condition is present, an excellent application is the watery solution of ichthyol (from ʒ ss. to ʒ j to the ounce) allowed to dry on, more especially for pruritus ani. Painting the surface with tincture of benzoin is recommended, and in some cases that are rebellious a good effect is produced by nitrate of silver, 5 to 30 grains in water, or, as advised by Crocker, in sweet spirit of niter. The nitrate of silver solution is also very useful in pruritus of the scrotum. In pruritus ani the method advised by Allingham is sometimes worth trying. It consists in introducing a conical plug of bone or other hard substance into the anus at night and retaining it in place by a suitable dressing. It acts on the principle of diversion. The same principle explains the good effects of multiple scarification in old cases of pruritus of the scrotum, as recommended by Vidal.

The tincture of gelsemium is valuable in acute coryza and neuralgic affections.

In folliculitis nasi the local application of a 20 to 30 per cent. watery solution of ichthyol appears to be the best remedy.

Pyrosis.—Heartburn is best treated by medicines which act upon the secretions and move the bowels. Rhubarb, with magnesia and sesqui-carbonate of ammonia, in an aromatic water; blue pill, with Castile soap; and alkaline solutions in bitter tonic effusions, or in lime water, are commonly employed, and are most useful when this symptom is connected with acidity. But when heartburn is attended by rancid, septic or insipid eructations, the mineral acids, as the nitric, the hydrochloric, and the aromatic sulphuric acids, given in simple camphor or aromatic water, or in suitable tonic infusions, will be most serviceable. Dr. Pemberton advises lemon-juice in these cases, and Dr. Todd, the phosphoric acid. When there is a liability to heartburn, wine spirits, and particularly malt liquors, should be avoided. Hock or old sherry may, however, be taken in great moderation in seltzer water.—*Dietetic and Hygienic Gazette.*

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Editorial.

IVY POISONING.

We are fast approaching the flowering season, or that portion of the year which corresponds to the maximum period of infection with the poison of the rhus family. Dermatitis venenata is sufficiently prevalent in most sections to justify attention to the most important of all measures —prophylaxis. The toxicodendric acid of MAISCH was for a long time held to be the causative agent in the production of this condition, until PFAFF, of Harvard, showed in 1897 that the poison was not a volatile acid but rather an oil which he termed toxicodendrol. He maintained that infection with the rhus toxicodendron occurred only by direct contact. The common experience, however, of the extreme susceptibility of some persons without direct contact with the plant, or with a third party coming in contact with the poisonous rhus family, fails to corroborate his views, which have been mentioned by FRANK, and recently by SCHWALBE. As was stated by the writer in 1898, "That such a thing as a predisposition to ivy poisoning exits, no one who has had very wide experience with the condition will deny. While one may come with perfect impunity into the closest contact with the plant (handling it, rubbing against it), another has but to be in the neighborhood of its growth to become the subject of a most extensive infection. In the latter cases it seems as if the very winds themselves waft the poison to the victim."

Prophylaxis embraces a careful avoidance of all "ivy-looking shrubs," especially by those who from previous experience know of their susceptibility. Persons returning from a stay at the park, cemetery or country resort should wash their face and hands very thoroughly with an alkaline solution, such as bicarbonate of soda, or, as suggested by SCHWALBE, with a one-tenth to one-half per cent. solution of carbonate of potash. The success of alkalies as prophylactics favors the toxicodendrol theory, for the oil, which is said to remain in the "openings of the sudoriferous and sebaceous glands," requires an alkali for its destruction. Be the theory of its causation what it may, attention to every possible detail is necessary for the escape by susceptible persons of this annoying affection.

THE ANNOUNCEMENT BY KOCH of the discovery of tuberculin was hailed, as many will remember, with great joy and gratification, and its adoption was instituted with great hopes. Many expressed explicit confidence in its specific character and felt safe in giving a good prognosis even so far as ultimate cure. So absolute was the faith of many physicians that numerous institutions and sanitaria for the tuberculin treatment were organized, and the method was carefully and closely followed. It soon became apparent that the much sought and longed for specific had not been found, and its use as a therapeutic measure was given up in a short time. That tuberculin has its field of usefulness, however, will be seen from the excellent contribution by Dr. J. W. WAINWRIGHT, who presents the status of the preparation in a conservative and up-to-date manner. Though short, the paper deals very concisely with the various tuberculin preparations, and places particular stress upon its diagnostic value,

that is its power of producing a febrile reaction when injected in very small quantity into tuberculous subjects.

The exceptions to the rule are few and far between, and a febrile reaction "produced by a minimal dose may be accepted as evidence that the individual is tuberculous." If a cure is ever to be expected in the "white plague," it will only be brought about by an early diagnosis, and in properly selected cases tuberculin may be considered a valuable adjuvant.

It is a fact which admits of no argument that erysipelas of the face is more common than that of any other portion of the body, and that recurrences in this situation far outnumber those in other regions. Facial erysipelas is made the subject of a short therapeutic article by Dr. Michael Schiller, who explains this fact by the usual existence in the nose or mouth of lesions "which form a suitable soil for the origin of infection." We agree with the writer in his expressions on the subject, and feel convinced that a careful and systematic perusal of the nares will add to the list of cases having this origin. His method of treatment, the "combined method" of Allen, has proven so efficacious that he has practically abandoned all others. The subject is a practical one, and deserving of attention; we invite a general discussion on its treatment, and look forward to further contributions from our readers.

Seldom does one meet with a condition in which therapy proves of so little avail as in the so-called idiopathic pruritus or pruritus essentialis. Excluding the pruriginous affections, such as urticaria, lichen, prurigo, eczema, etc., or conditions associated with animal parasites, there is an itching for which no cause can be found apparently, and which, when generalized, becomes so intense as to drive the patients to desperation. It is this pruritus essentialis, to which especial attention has been given by Dr. E. B. Bronson, whose article we reprint in part because of its great length. The article abounds in therapeutic suggestions of great value and covers the very cases which so frequently baffle us. Pruritus is a subject which the general practitioner cannot afford to pass by, and it will be well worth while to devote his attention to this contribution.

THERAPEUTIC NOTES.

Glycerite of tannin, two drachms to a glass of water, proves a good preparation in relaxed and œdematous conditions of the oral mucous membrane.

Lanolin, lard, and lime water, in the proportions of one, two, and three, is a soothing application for sunburn, superficial erythema, and mildly irritating skin lesions.

Lugol's solution is a good local application in trichophytosis cruris.

Orthoform acts as an analgesic when applied to a tooth cavity.

For the disagreeable odor of atrophic rhinitis nothing can take the place of a properly diluted solution of formalin.

In the trachoma, with large, soft, and flabby follicles, the copper stick is very valuable.

Three drops of aqua ammonia every three hours, well diluted, has been recommended for internal administration in the treatment of furunculosis.

The officinal lotio nigra, containing a drachm of calomel to a pint of lime water, affords marked relief when locally applied to the lesions of ivy poisoning.

As a general dusting powder, equal parts of boric acid, bismuth and calomel prove useful.

Large doses of adrenalin will tide over a collapse after the administration of an anesthetic.

Current Literature.

Sodium Glycocholate in Disease of the Liver.—Keown (*Journal American Medical Association*, August 16, 1902) states:

The glycocholate of soda has been used extensively in the Mt. Hope Retreat when they were led to suspect a torpid condition of the liver; especially in cases of alcoholism, morphine habit, neurasthenia, and melancholia has it been very successful, acting as a purge for the liver with a result such as could not be obtained by any other drug, using regularly five grains three times a day, and occasionally going as high as fifteen grains in cases of obstinate constipation, producing a slight diarrhea for a day or two, after which the bowels were more regular.

The author has used the glycocholate of soda in the St. Agnes Hospital in two cases of pulmonary tuberculosis, employing three grains three times daily for the better emulsification and absorption of fats in the forced diet of such cases, one gaining ten and one-half pounds and the other nine pounds in three weeks. It is of use in all cases where the rapid absorption of fat is desirable—for convalescents from typhoid fever, cases of diabetes mellitus, etc.

The author has used it in three cases of morphine habit, not as a cure for the habit, but rather in the nature of a cosmetic, as it certainly improves the color of the skin, removing that muddy appearance so usual in those cases. The results were quite satisfactory. The bile was rendered more fluid and was more freely eliminated from the liver than it was when the patient was in the habit of using morphine, which, as is well known, lessens all secretions. In a case of neurasthenia in which the complexion was of the same pasty, dirty color, excellent results were obtained by using glycocholate of soda alone without any other treatment. The indiscriminate use of glycophosphate of soda is to be avoided, as it is not suited to all cases, and although there are no contra-indications for its use, yet good results are only to be expected in those cases of gall-stone formation and of so-called torpid liver, as found in certain diseases, such as alcoholism, drug habits, melancholia and its congeners, constipation, chronic malaria, etc.; it also materially aids the digestion of fats, and may prove a useful adjunct in wasting diseases of all kinds.—*Therapeutic Gazette*, January 15, 1903.

Treatment of Tuberculous Cystitis.—Numerous have been the attempts to stay the progress of the tuberculous process in the bladder, and equally numerous and alike unsuccessful the measures used to allay the, at times, almost intolerable pain caused by contact of the urine with the tuberculous ulceration, writes A. Monfort (*Gaz. Méd.*, Nantes, Dec. 6, 1902). After having run the gamut of all the remedies in general use for this condition, he has evolved a method of treatment at once antiseptic, sedative and healing, which, if it may not yet, owing to its limited use, be considered in the light of a permanent cure, has, at least in the author's experience, fulfilled all the conditions requisite for the control of distressing and dangerous symptoms. This method consists in lavage of the bladder with salt and water, 7 in 1,000, and local medication with guaiacolated iodoform and sterilized olive oil in the following proportions: Olive oil, 100 gm; guaiacol, 5 gm.; iodoform, ½ gm. With the antiseptic, healing and analgesic properties of the latter, guaiacol combines to form an admirable remedy for the treatment of this painful form of cystitis; and the preparation makes it possible to use a full lavage of artificial serum; the painful effect of the contact of salt with the ulcerations being entirely nullified thereby. The author believes the effect of artificial serum to be as beneficent in tuberculous cystitis as in tuberculous peritonitis; and makes a full injection of it into the bladder, directing the patient to retain it as long as possible. Under this combined treatment pain and

hematuria are said to cease and micturition becomes less frequent and then normal. At the time of writing several cases were improving under this treatment, and one case is quoted in which the cystitis was apparently cured; but one of the kidneys subsequently became affected. The author has in view the direct treatment of the kidneys with these remedies through catheterization of the ureters. — *Medical News*, February 21, 1903.

Treatment of Buboes that Threaten to Suppurate. — E. S. Sherman (*New York Medical Journal*, February 7, 1903, says:

A large percentage of buboes could be entirely prevented by the proper care of the concomitant genital lesion. Therefore the *prophylactic* treatment is important. Any suppurative condition of the external genitals may cause an inguinal adenitis, but the most common cause is chancroids and especially that class of cases in which the free discharge of pus from the ulcers is more or less obstructed, as by crusts, dry, adherent dressings, and phimosis. When a patient with any ulceration of the external genitals presents himself, the local treatment should be thorough and antiseptic. Scabs or crusts should be removed, the prepuce slit up if there is ulceration under it with phimosis, and measures taken to keep all ulcers clean and free from obstructive accumulations. In the case of chancroids, they may be cleansed with peroxide of hydrogen, dried with cotton, and the specific nature of the sores destroyed by the application of pure carbolic acid, followed by nitric acid. The anesthetic effect of the carbolic acid lessens the pain of the nitric-acid application. A bit of cotton twisted tightly on the end of a match makes a good applicator for this procedure. Care should be taken that none of the acid touches the healthy skin or mucous membrane. Patients on whom this treatment is begun early have glandular involvement less frequently than do those with neglected ulcerations. If one or more glands become inflamed, or are already inflamed and threatening to suppurate when the patient is first seen, a saline laxative should be prescribed and the following ointment applied on lint, and over this a compress and a firm spica bandage:

℞ Ichthyol .....
Mercurial ointment (50%)... } equal parts
Compound iodine ointment.
M.

If practicable, the patient should go to bed and have an ice-bag placed over the dressing. If after twenty-four hours the inflammatory symptoms have improved or are stationary, this treatment may be continued. But if there is no improvement, the patient will be saved much time and pain and probably an unsightly scar by an immediate excision of the inflamed glands. For this an anesthetic should be given and strict asepsis observed. The incision should be parallel with Poupart's ligament and no longer than necessary for the removal of the inflamed gland or glands. They may be dissected out with blunt-pointed scissors and the wound closed without drainage if no pus is present. If any pus is found, all broken-down tissue should be thoroughly curetted out and the wound lightly packed with sterile or bichloride gauze.

If, however, after twenty-four hours' local treatment the formation of pus seems inevitable and the patient declines an operation, pain may be somewhat relieved and suppuration hastened by warm, mildly antiseptic applications, such as gauze compresses wrung out of hot bichloride of mercury solution, 1-5,000 in strength, or sodium bisulphite solution, one ounce to a quart of water.

Dangers from the Use of Gelatine.— W. L. Chapman (*The Providence Medical Journal*, March, 1903), in speaking of the control of hemorrhage by gelatine, says: It is not to be supposed, however, that the use of gelatine is without its dangers. It is made from unclean things, and tetanus occasionally finds its way into commercial gelatine. Tetanus has a high resist-

ing power to heat and antiseptics, and the spores resist boiling for a considerable length of time and retain their virulence for many months when in a dried state. This shows the necessity for fractional sterilization. Then, too, we know that some of the decomposition products of gelatine are very poisonous, which suggests the possibility of intoxication when given by the mouth, should the patient have a dilated or dependent stomach. There is furthermore the possibility of the embolism of particles of solidified gelatine if the mass is near a blood vessel of any considerable size, or if it is injected directly into the blood stream. It would seem that the injection of solutions which do not solidify was more rational than that of the higher percentages which remain massive and are absorbed only after a considerable length of time. It must be said, too, that the injection of semi fluid gelatine is much more painful than that of solutions, which may be given in one or more localities to prevent local distension. Again, there is the possibility of causing too great an increase in the coagulability of the blood, with the formation of local thrombi and their serious results.

Pyloric Stenosis in Infants.—E. W. Saunders (*Med. Times and Register*) says that in the treatment of this disease the indications are: First, the administration of some medicinal agent, which shall overcome to a greater or less extent the violent contraction of the pylorus. Among the drugs to be recommended are belladonna, bromides and chloral. Second, the treatment of the secondary gastric irritation. This results from the stagnation of food, and should be treated by washing out the stomach and by giving it rest; rectal feeding should therefore be resorted to from time to time, and for twenty-four hours nothing but water given by the mouth; when food by the mouth is again allowed the stomach should be washed out occasionally to remove a possible residuum of undigested food. Third, the diet of the child should consist of food which forms no coagulum in the stomach. Milk or any food containing undigested casein will not answer, consequently the mother's milk is usually unsuitable, while the milk of a wet-nurse in advanced lactation will succeed. Whey or peptonized milk, or a mixture of both, is usually the best food. The deficiency in fat should be supplied by cod-liver oil. A very small percentage of cream can be gradually added. To aid the motor power of the stomach by gravity, the infant should be placed on its right side after nursing. The end to be accomplished is hypertrophy of the gastric wall without dilatation, hence the quantity of food should not be large. Gaseous distension of the stomach should by all means be prevented. When the infant fails in spite of rational treatment, surgical intervention must be advised.—*The Medical Brief*, March, 1903.

Gall-Stones.—H. Richardson (*Medical News*, February 21, 1903) says:

The treatment of this condition should have for its object the increase of the quantity of bile, and also of the glycocholate of soda, in order to hold the excretory components of the bile in solution and at the same time stimulate the gall-bladder to empty itself as often as possible, so as to prevent stagnation.

To obtain these results a purge of calomel and soda should be given occasionally to relieve the intestine of undigested food and possible toxins which may accumulate; at the same time the patient should drink a large tumblerful of water containing five grains of sodium bicarbonate, about half an hour before meals, and an injection of a liter of normal salt solution every other day, well up into the colon, will be of great assistance. To increase the solvent powers of the bile, five-grain capsules of glycocholate of soda (Hynson and Westcott, of Baltimore), three times a day after meals, will have the desired effect; in cases where stone is already present or suspected, the dose may be

raised to ten grains. This drug occasionally causes nausea for the first day or two, which passes off if the patient continues the treatment.

The diet should be abundant, consisting principally of carbohydrates, but not excluding meats; the meals should be taken at regular hours, the last about an hour before retiring.

Exercise is an important aid, as the free and full action of the diaphragm materially assists the gall-bladder to empty itself; but if gall-stones are present it must be used with discretion.

Many of the pains radiating from the region of the gall-bladder are due to adhesions which can only be relieved by operation, for, as the adhesions interfere with the contractions of the gall-bladder, they have a tendency to cause stone formation; in these cases, therefore, an operation is indicated.

Chronic constipation is often caused by torpid liver and by insufficient excretion of bile; in such cases the treatment just described will be found to give relief. It seems probable that by the administration of glycocholate of soda between the acute attacks of hepatic cholic not only will the formation of stones be prevented, but those already formed will be dissolved, preventing the recurrence of the attack. During the acute attacks, or when there is complete occlusion of the gall-duct, shown by alcoholic stools, the bile salts are not only not indicated, but contra-indicated, it being evident that to increase the quantity of bile at such times would increase the jaundice, but if the gall-duct is open, and especially if bile pigment is present in the urine, the treatment here outlined is indicated.

Diet in Bright's Disease.—In acute cases and in the occasional exacerbations in chronics, a milk diet is essential—a strictly milk diet. Rich milk, not skim milk. The patient must be nourished, not starved. I have never found one who could not live on milk, although many profess to be unable to take it, claiming it makes them bilious, (whatever that means). The addition of seltzer, vichy or lime water may be required, or buttermilk or Koumyss may be substituted. Of course, an exclusive milk diet is not possible for years, nor is it desirable. I have found the Thomas diet lists, published by Saunders, to be extremely convenient and well adapted to the average case. Erasures or additions may be needed, to suit the individual. Pure water should be given in large quantities when the diet is not exclusively milk. Any simple bottled water will answer, aerated or not, according to patient's preference. Bethesda, Poland, and Shasta are good examples. Both malt liquors and spirits should be absolutely prohibited. In interstitial cases a little dry wine may be useful. A feeble old man with impaired digestion, hardened arteries, and a failing heart may be benefited thereby.—John C. King (*Southern California Practitioner*, February, 1903).

Prophylaxis in Typhoid Fever. — *The Medical Examiner and Practitioner*, February, 1903, speaks as follows on this very important subject:

There is one method of treatment, however, which would render all other methods unnecessary, and that is the prophylactic. With even ordinary precautions, typhoid fever could practically be wiped off the face of the earth. Thousands of useful lives are sacrificed yearly through the criminal negligence of municipalities and individuals. We know that the bacillus typhosus is the cause of typhoid fever, and that in order to become harmful it must find an entrance into the intestinal canal. Its modes of conveyance are few, and the most common and important is unquestionably by the infection of water. According to Osler, the prevalence of typhoid fever in cities is directly proportionate to the efficiency of the drainage and the water supply. He states that there is no truer indication of the sanitary condi-

tion of a town than the returns of the number of cases of this disease.

During the autumn months there is usually a large increase in the number of cases of typhoid fever in New York city, and in almost every instance the infection, with reasonable certainty, can be traced to a locality outside of the city proper. New York can justly feel proud of the purity of its water supply, as far as the presence of typhoid germs is concerned, and there can be no adequate reason why other and smaller communities should not be able to exercise the same strict supervision in this respect as is done by the Board of Health of this city. At frequent and regular intervals the water is subjected to a thorough test by the chemist of the Health Department, and, as an additional safeguard, the German Medical Society of this city recently appointed a committee to petition the proper authorities to construct an efficient filtration plant. We trust that this excellent recommendation will be adopted, and we fully agree with the assertion of the committee, that the populous Croton watershed is liable to all sorts of unavoidable contaminations, and that the only remedy for such a condition is filtration of the water before it reaches the consumer.

In small towns and villages and in scattered country communities, where the drinking-water is usually obtained from wells and springs, the following excellent precautionary measures, which were recommended in the *Journal of Hygiene*, July, 1902, by Major A. R. Aldridge, a sanitary officer in the English army, stationed in Bengal, should be carried out as closely as possible:

"1) Avoidance, as far as possible, of storage of water near habitations where, from the proximity of dry earth latrines and the filth trenches, it may be polluted. 2) Latrines and urinals should be situated as far as practicable from kitchens and stored water. They should have impervious floors. 3) All food, feeding utensils, etc., should be protected from dust and flies. 4) For sewage disposal Major Aldridge recommends one of the bacterial methods, with application of the effluent to the land."

When there is any suspicion that the drinking-water has actually become infected with the bacillus of typhoid fever, the precaution to boil the water should always be taken. None of the ordinary water filters can be depended upon to remove the germs.

The infection of food is the second important consideration as a method of conveying typhoid fever. These articles of food include milk, oysters, and the raw vegetables, such as celery, tomatoes and various salads. Many epidemics of typhoid fever have been traced to infected milk. Infection from this source can be guarded against by boiling the milk, and this should always be done if there is any reason to doubt its purity.

Indications for Hypodermoclysis.—R. C. Kemp (*N. Y. Medical Journal*, February 28, 1903) says that:

1. Hypodermoclysis increases the quantity of fluid in the vessels by replacing that which has been lost, as from hemorrhage or diarrhea; it adds fluid to the circulation, and thereby acts as a stimulant to a rapid and feeble heart, as in shock.

2. It dilutes the poison of disease and aids in the elimination of toxic products through the diuretic action on the kidneys, as in sepsis, or in uremia.

3. It causes profuse diuresis and relieves renal congestion, as in uremia, oliguria, or in acute congestion of the kidneys.

4. The saline injection is asserted by many to have a hemostatic effect, and is thus given in hemorrhage, as from gastric ulcer, intestinal ulcer, or in pulmonary hemorrhage. On the same principle, as heretofore noted, I have seen small quantities of salt water given by mouth in the Adirondacks, in cases of pulmonary hemorrhage.

There is often a multiple effect secured by the hypodermoclysis. Thus, in chol-

era, it replaces the loss of fluid, stimulates from shock, and also acts as an eliminant of the poison. Hypodermoclysis would therefore be of value in the following conditions: In diarrheas with excessive loss of fluid, as in dysentery, cholera infantum, typhoid and allied diseases; pneumonia, septicemia, pyemia, peritonitis, pyelitis, septic endocarditis, puerperal sepsis, purpura hemorrhagica, severe burns, toxemia due to colon bacillus, tetanus, jaundice, plague, yellow fever, scarlatina, measles, typhus, diabetes, shock; hemorrhage from any cause; as an eliminant in diphtheria, following antitoxine injection; in toxemia of diphtheria, or from any cause; in any coma due to toxemia; in puerperal eclampsia — preceded by venesection; in oligusia, uremia, suppression of urine, renal congestion; in pulmonary edema, pleurisy with effusion, or ascites due to oliguria; in poisoning, as an eliminant, as from carbolic acid, alcohol, opium, carbonic acid gas, and especially in belladonna poisoning. In the last condition frequent catheterization should be employed.

Potassium Permanganate as an Antidote in Morphine Poisoning. — *The N. Y. Medical Journal*, March 7, 1903, says: S. A. Finkelstein, of Kieff, says that too little attention has been paid to potassium permanganate as an antidote in acute opium and morphine poisoning. The latest text-books on pharmacology dwell chiefly on the symptomatic treatment and the administration of atropine. Tappeiner, Kohler and others recently have expressed serious doubts as to the antagonism of atropine and morphine, which is purely theoretical. The question is still unsettled whether the stimulation of the respiration and the increase in the blood-pressure produced by atropine are due to the action of this drug upon the respiratory center and the vasomotor center in the medulla oblongata, or are the results of its action on the vagus nerve endings in heart and lungs. W. Moor, of New York, has reported seventy-one cases of morphine poisoning treated by potassium permanganate with marked success. The doses used are from thirty to sixty minims of a four to five per cent. solution in water, subcutaneously, until improvement is noted. Internally, it should be given in doses of four grains of potassium permanganate to each three grains of morphine taken, and for each ounce of infusion of opium six grains of potassium permanganate should be given. If the amount of poison is unknown, then from eight to ten grains of potassium permanganate are given in a glass of water, and then the stomach should be washed with a weak solution of the same salt. The author reports the following case in which he used the Moor treatment. A young woman had taken about a gramme of morphine hydrochloride an hour and a half before the physician arrived, and was found unconscious, pale, with froth at her lips, lying perfectly relaxed. Her respiration was slow, interrupted, resembling the Cheyne-Stokes type, eight per minute; her pulse slow, 36 per minute, small and irregular. The reflexes were absent and the pupils were greatly contracted and insensible to light. A bottle with the remains of the solution was found on the floor next to her bed. One gramme of a four-per-cent. solution of potassium permanganate was injected under the skin. After ten minutes a marked improvement set in. The pulse and respiration became more rapid and more regular. The injection was repeated after half an hour, and within three hours the improvement was so marked that the patient could be left alone. There is no question that in this case the antidote suggested by Dr. Moor saved the patient's life.

Stimulants. — It is a good general rule never to give whiskey or other stimulants to a person who is bleeding, because it is apt to increase the hemorrhage and to augment the patient's excitement. Keep your stimulants away until after the bleeding has stopped, and they are often unnecessary by that time. — *Int. Jour. of Surg.*

Book Notices.

Clinical Treatises on the Pathology and the Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl Von Noorden. Authorized American Edition. Translated under the Direction of Boardman Reed, M.D. Part III. Membranous Catarrh of the Intestines (Colica Mucosa). By Prof. Dr. Carl von Noorden, with the Collaboration of Dr. Carl Dapper. E. B. Treat & Co., New York, 1903.

This volume treats very forcibly and clearly of colica mucosa, a condition which has occupied so much attention on account of its obscure etiology and the difficulty of effecting a cure. The author expresses the opinion that chronic constipation predisposes to the affection and that this predisposition, *plus* an excessive irritability and over-activity of the glands of the large intestine, due to nervous influences, is the etiological factor. His therapy is directed to the complete and permanent disappearance of the constipation by a so-called "dietetic exercise treatment of the intestine in contradistinction to the protective treatment that is usually employed" and by appropriate treatment of the general nervous system. His tables show complete success in 79%, permanent success in 50%, incomplete success in 15.8%, relapses in 13.1%, and failures in 5.2%—a most encouraging result. The cases are thoroughly reviewed and the plan of treatment is specifically and carefully stated. This volume offers interesting reading on an interesting subject, and if followed should give us favorable and positive results with our cases.

PAMPHLETS RECEIVED.

Report of the Kensington Hospital for Women. From Oct. 14, 1901, to Oct. 11, 1902.

Further Notes on Vesical Hyperesthesia in the Female. By Frederick Bierhoff. *American Medicine*, July 5, 1902.

A New Cystoscope for the Simultane is Catheterization of Both Ureters, and for Double Current Irrigation of the Bladder. By Frederick Bierhoff. *Medical News*, March 8, 1902.

On the Technique of Cystoscopy in the Female. *Medical News*,, May 3, 1902.

SELECTED PRESCRIPTIONS.

Tetanus.—

℞ Potassium bromid. ..... 5 gm.
Tinct. hyoscyamus ..... 10 c.c.
Tinct. gelsemium ..... 3 c.c.
Comp. syr. sarsaparilla, q. s. 60 c.c.

M. Sig. ʒ i q. 3 h. —J. R. Care.

Acute Laryngitis in Children.—

℞ Tinct. opii camph.,
Syr. ipecac.....āā ʒ ij
Syr. scillae ..... ℥ ss
Syr. tolut. ..... ʒ iij

M. Sig. Half to a teaspoonful in lemonade every two hours. —Hatfield.

Pruritus Ani.—

℞ Ext. conii ..... ʒ ij
Ungt. stramonii,
Lanolini.....āā ℥ i

M. Sig. Apply at bed-time and before stools. —Tutle.

Nasal Catarrh.—

℞ Acetat. aluminis,
Menthol,
Acetanilid .....āā gr. i
Bism. subnitr..... ʒ i

M., ft. in vial. Sig. Snuff. —B. B. Cates.

Cicatrices.

℞ Thiosinamin ..... 10 parts
Glycerin ..... 20 parts
Distilled water.....q. s. 100 parts

M. Sig. Inject Pravaz syringeful every other day. —Juliusberg.

Pruritus Vulvae.—

℞ Menthol.....gr. ¾
Guaiacol.....gr. iv to xv
Oxide zinc..... ʒ iiss
Vaselin .....q. s. ℥ i

M., ft. ungt. —Robin and Dalche.

Typhoid in Children —

℞ Guaiacol .....
Glycerini.....āā ʒ i
Alcoholis..... ʒ ij

M. Sig. One to six drops in whiskey and water every two hours. —Koenig.

Diuretic.—

℞ Inf. rad. onon. spinos. ...10.0 : 200.0
Liq. kal. acetic.
Oxymell. scill. .....āā 15.0

Sig. Tablespoonful every three hours. —Nothnagel.

Hypertrophic Rhinitis.—

℞ Acid. lactic.
Aq. dest. .....āā 30.0

Sig. External use. —von Schrötter.

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COLSATHYL

For Rheumatism, Gout, Neuralgia, Migraine, Sciatica, Etc.

It is an old clinical observation that in many diseases a combination of several drugs, which from previous experience are known to act well singly in that particular condition, will produce more rapid, more favorable and more lasting results than single drug medication. In syphilis, for example, in which mercury and iodide of potash are both considered specifics, a combination of both in the form of the so-called mixed treatment will often yield better results than when either is given alone. In malaria, which in most instances yields to quinine, a combination with arsenical preparations, or with Warburg's Tincture, will not infrequently prove more efficient.

In rheumatism and its allied conditions, the salicylates and their derivatives are the remedies *par excellence.* Many cases, more especially those of a subacute and chronic nature, fail to respond to the use of a single drug, and a judicious combination, such as is offered to the medical profession in the form of colsathyl, will fill a long felt want.

Colsathyl is composed of chemically pure colchicine, oil of gaultheria, and salol, each of which is useful in rheumatic and gouty conditions, and each of which re-inforces the physiological action of the other. The alkaloid colchicine is the active constituent of all the colchicum preparations, without the depressing effects, more particularly the gastro-intestinal disturbances (diarrhea, colic, etc.), so prone to occur after the use of the tinctures and wines. It is just in the vague muscular pains of the middle and old age, which are frequently due to uric acid diathesis, that colsathyl finds a most useful application, and it is just in these cases that depression and diarrhea must be guarded against, a condition accomplished by the use of colsathyl in appropriate dosage.

Salol and oil of wintergreen are useful antirheumatics, analgesics, antineurotics, and antiseptics. While large doses of either may produce toxic symptoms and renal complications, small doses of both produce neither, and on the other hand they relieve other symptoms.

The indications for the use of colsathyl become evident from its formula (colchicine, gr. $^1/_{100}$; salol and oil gaultheria equal parts to fill a 5 minim soft elastic capsule); in acute, subacute and chronic articular rheumatism, in gout, rheumatic gout, uric acid diathesis, myalgia, neuralgia, migraine, sciatica, etc., its use will be followed by gratifying results. The number of daily doses must be regulated according to the severity of the symptoms and the response to their use. Colsathyl is dispensed in the form of soft gelatine capsules, each containing the afore-mentioned dose; these capsules are oval in shape, easily soluble, non-irritating, and pleasant and easy to take.

It is customary to order 1 or 2 capsules three to four times daily for the average adult patient, and to continue taking Colsathyl for a week after apparent recovery. It is well also to take Colsathyl in time to ward off and prevent renewed attacks. While taking Colsathyl plain food and lots of lemonade will help toward success.

DERANGED UTERINE FUNCTIONS.

By James A. Black, M.D.,
Hospital Department, Pennsylvania Reform School.

It is safe to say that to the average physician, who is confronted almost daily with the ordinary cases of suppressed and deranged uterine function, no other class of cases is so uniformly disappointing in results and yields so sparing a return for the care and time devoted to their conduct.

Patients suffering from disorders of this nature are usually drawn from the middle walk of life, and, by reason of the pressure of household duties or the performance of the daily tasks incidental to their vocation, are entirely unable, in the slightest degree, to assist, by proper rest or procedure, the action of the administered remedy.

Many of these patients, too, suffer in silence for months, and even when forced by the extremity of their sufferings to the physician, shrink from relating a complete history of their condition and absolutely refuse to submit to an axamination. Authoritative medical teaching and experience unite in forcing upon the attendant a most pessimistic view of his efforts in behalf of these sufferers under such conditions.

It is in this class of practice, where almost everything depends upon the remedy alone, that a peculiarly aggravating condition of affairs exists. A very limited list of remedies of demonstrated value is presented for selection, and I believe I am not wide of the mark in saying that, in the hands of most practitioners, no remedy or combination of remedies hitherto in general use has been productive of anything but disappointment.

Some time ago my attention was drawn to Ergoapiol (Smith) as a combination of value in the treatment of a great variety of uterine disorders. Its exhibition in several cases in my hands yielded such happy results that I have used it repeatedly in a considerable variety of conditions, and with such uniformly good results that I am confirmed in the opinion that its introduction to the profession marks an era in modern therapeutics. In the treatment of irregular menstruation and attendant conditions I have found it superior to any other emmenagogue with which I am familiar in the following important particulars:

1. It is prompt and certain in its action.
2. It is not nauseating and is not rejected by delicate stomachs.
3. It is absolutely innocuous.
4. It occasions no unpleasant after-effects.
5. It is convenient to dispense and administer.

The following clinical notes will afford a general idea of its action in a variety of cases:

Case 1.—Mrs. —— came to me presenting the following symptoms incident to a delayed menstruation: Persistent headache of a neuralgic character; dull, aching pain in limbs and lumber region; cramp-like pains in abdomen, and considerable nausea. The menstrual period was overdue seven days, but as yet there was no appearance of flow. Her periods had always been occasions of intense suffering, but had never before been delayed. I began the use of Ergoapiol (Smith), with some misgiving owing to the irritable condition of the stomach. One capsule every three hours was administered without any aggravation of the gastric distress. In twenty hours a normal menstruation was well under way; the flow was slightly increased over that observed on former occasions. The pains had subsided. Ergoapiol (Smith) was administered, one capsule three times a day, during the menstrual period, which terminated in five days. The patient was instructed to return for a quantity of the remedy several days before the next menstrual period. She did so, and, following directions, took one capsule three times a day for three days before expected menstruation. She subsequently reported that during the period

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Corrosive Sublimate, 1-32 gr.
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304 Sulphate Zinc, ½ gr.
Carbolic Acid, ¼ gr.
Ext. Hydrastis Fl., 1 gr.
Ext. Belladonna Fol., 1 gr.

305 Ext. Opium Aq., 3 grs.
Ext. Belladonna Fol., ¼ gr.

306 Sulphate Zinc, ½ gr.
Antipyrine, 1 gr.
Boric Acid, 2 grs.
Creosote, ¼ gr.
Fl. Ext. Hydrastis, 3 min.
Sulphate Morphine, 1-10 gr.

311 Boroglyceride, 5 grs.

312 Cocaine Muriate, ½ gr.
Sulphate Morphine, ¼ gr.

313 Ichthyol, 5 grs.

314 Ichthyol, 10 grs.

315 Iodoform, 2 grs.

316 Iodoform, 5 grs.

317 Iodoform, 10 grs.

318 Sulphate Morphine, ¼ gr.
Hydrastine Alk., 1-16 gr.

319 Resorcin, 2 grs.
Sulphate Zinc, ⅛ gr.

320 Sulphocarbolate Zinc, ½ gr.

321 **Protargol**, ½ gr.

322 **Albargin**, ½ gr.
323 **Argentamin**, ½ gr.

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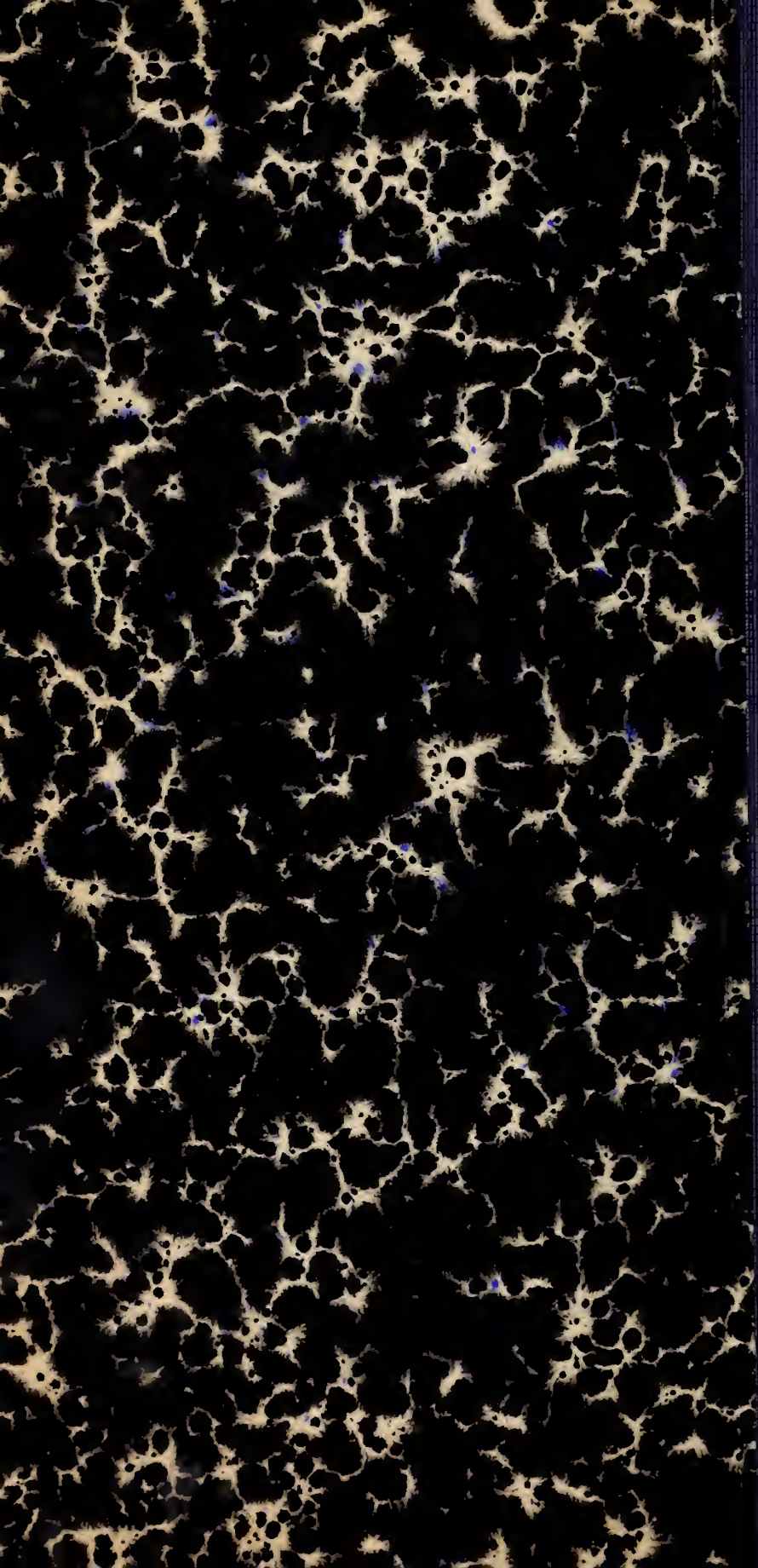
—lasting five days—there had been practically no pain, and that the amount of flow was, as far as she could judge, normal.

Case 2.—Miss ——, aged twenty-one, had suffered for two years with irregular and painful menstruation. Had commenced to menstruate when sixteen, menses being very scanty, but regular and accompanied with but slight degree of suffering. Was never of a robust physique, but in the main healthy. When about nineteen, considerable nervous trouble was inaugurated by grieving over a great bereavement, and the menses became more and more painful. The anguish became such a horror to her that she frequently resorted to morphine, partly to allay pain and partly to procure sleep. Fortunately she had not, as yet, contracted the habit, but the tendency was undoubtedly in that direction. When first consulted by her, examination was not granted. Menses appearing shortly afterward, was called upon to afford relief. Flow was very scanty and clotted. There were sleeplessness, terrific headache, pain in back, constipation, etc. Ergoapiol (Smith) was administered, one capsule every three hours. Flow was considerably increased, there was a gradual lessening of all the suffering, and almost complete relief in twelve hours. This young woman has been placed upon Ergoapiol (Smith), one capsule twice daily for one week preceding appearance of menses, and has passed through several periods with very little suffering. An examination made recently showed a marked retroversion and very sensitive cervix. A properly applied supporter will doubtless work considerable benefit in her case, but it cannot be disputed that the comparatively easy menstruations occurring recently, in spite of the displacement, were due entirely to Ergoapiol.

Case 3.—Miss ——, aged eighteen, had alwas been regular in menstruating; could get no history of any previous disorder within patient's knowledge. Contracted a heavy cold about time of menstrual epoch, and was much alarmed by non-appearance of flow. Discomfort was not marked. Ergoapiol (Smith), one capsule three times a day, was prescribed. Reported later that flow was established in twenty-four hours after treatment was commenced.

The delay in this case was about four days.

Case 4.—Mrs. —— consulted me, giving the following history: Three months previously had had a profuse uterine hemorrhage occurring about the time of menstrual period. As she had for a number of years menstruated only at intervals of about six or seven weeks, the fact that menstruation had been suspended for six weeks before the date of trouble was not especially significant. The hemorrhage, which was at no time alarming, had continued for several days. Since that time there had been an almost constant wasting and at times a considerable flow. Her condition was practically invalid. Examination revealed a gaping os, a cervix exceedingly tender and abraded, and a large uterus. Before resorting to curettement it seemed advisable to try other measures. Ergoapiol (Smith), one capsule every three hours, was prescribed. In about twenty-four hours there was a decided increase in the discharge, which consisted of clots and considerable debris. There were some pains, of a cramp-like nature. The discharge began to grow less in about four days and ceased entirely in one week. There was a marked improvement in general condition. Local treatment entirely removed the tenderness and abraded condition of cervix. Ergoapiol (Smith) was administered several days before next menstrual period and resulted in a very satisfactory period. In this case it appears to me the remedy saved the patient the ordeal of curettement, acting as a prompt uterine stimulant.

Her condition locally and generally has since steadily improved.